The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOL. XXXVIII. CHICAGO, SATURDAY, MAY 31, 1902. No. 22.

Original Articles.

NEED OF MUCH MORE ACCURATE KNOWLEDGE CONCERNING BOTH THE IMMEDIATE AND REMOTE EFFECTS OF THE REMEDIAL AGENTS IN GENERAL USE;

AND THE EXERCISE OF MORE CARE TO AVOID THE COINCIDENT ADMINISTRATION OF ANTAGONISTIC REMEDIES IN ACUTE DISEASES.

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Perhaps the three most important defects in practical medicine of the present day, as seen both at the bedside and in works on therapeutics and practice of medicine, are: First, failure to fully appreciate the fact that all diseases are deviations from the natural standard of action or of structure in some part or in the whole of the living body, caused by either mental or physical influences, and progressing towards recovery or death in accordance with known laws of vital resistance; second, inadequate knowledge of the physiologic laws and processes that constitute the vital resistance of living bodies to the action of the various causes of disease; third, the imperfect knowledge of the action of many of the most important remedies in the materia medica, and consequently their frequent erroneous or even antagonistic use.

THE NEED OF KNOWLEDGE OF VITAL PROCESSES.

A knowledge of the causes of diseases both predisposing and exciting, and the laws governing their action in the living body; an accurate conception of the various morbid processes induced constituting diseases, their natural tendencies and terminations; and an equally accurate knowledge of the modes of action of remedial agents, must constitute the basis of all rational or independent medical practice. It is not sufficient that the physician may know the direct exciting cause of any form of disease, whether it be a microbe, a ptomain, a leucomain, a defective food supply, or a depressing mental condition. He should know also the conditions under which it is produced and propagated; the channels through which it gains access to the living body; the changes it produces in the elements of the blood or of the tissues; and the methods by which it is destroyed or expelled from the living body or induces death. For every pathogenic germ, toxic ptomain, or septic poison that gains access to the living body or any part of it is met by vital processes and conditions by which it is neutralized or expelled, or is multiplied until it destroys the life of the patient or the part in which it is propagated. The vital processes and conditions thus induced by the presence of the morbific agent to either neutralize or expel the offending cause, constitute the natural vital resistance or immunity, while the active disturbances of both function and structure, consequent on its continued presence and multiplication, constitute the symptoms or active phenomena of the disease. Nearly all the more eminent and philosophic writers on medicine from Hippocrates to those of the present day, make frequent references to the curative powers of "Nature," and most of them repeat the Hippocratic injunction to "follow Nature" in the methods of treating disease. Very few of them, however, have made any attempt to explain what they meant by "Nature" or her processes of cure.

THE NECESSITY OF EXCRETION.

The numerous investigations of the last half century, aided by all the instruments and processes devised for securing correct results, have, however, clearly shown that whenever any substance, whether developed within or introduced from without, is present in the living body and is not capable of assimilation and use as food, is either expelled through some of the secreting or eliminating organs unchanged, or oxidized and converted into materials either harmless or capable of more ready elimination. Therefore, oxidation, neutralization and elimination of pathogenic, toxic or disease-producing agents are Nature's chief processes for both preventing and curing disease. And the structures chiefly active in these processes are the bioplasmic or leucocytic cells of both blood and tissues and the various secreting and excreting structures of the body. The same, indeed, that are constantly engaged in oxidizing and eliminating the ordinary products of tissue metabolism and thereby preventing auto-intoxication and death. For every animal, from the lowest in the scale to the highest—from the microbe to the man—perishes if compelled to remain in full contact with its own excretory products. For example, the microbe of vinous fermentation ceases to multiply and soon dies if its excretory product, alcohol, is allowed to accumulate in the fluid surrounding it beyond 14 per cent. And man, representing the highest order of animal life, speedily perishes if retained in an atmosphere surcharged with his own renal, cutaneous and pulmonary excretory products.

THE VITAL RESISTANCE.

If it is true that the processes of oxidation, secretion and elimination of waste and disturbing or toxic agents constitute the vital resistance or curative powers of Nature, then in addition to ascertaining the cause or causes of any given disease it is equally important to learn both the channels through which it gains access to the blood and tissues, and the excretory or eliminating organs through which it is expelled.

It is by such knowledge only that we are enabled to direct those remedies that will aid the natural processes of cure with skill and efficiency. With all the facilities for minute and exact investigation afforded by our laboratories of chemistry, biology and bacteriology, supplemented by clinical wards of hospitals, we ought to be able to determine the efficient causes of all acute diseases, and to follow them from their entrance to their exit from the living body; and to see clearly the changes they undergo and the processes by which they are destroyed or expelled.

THE MINUTE ACTION OF EVERY DRUG.

With such knowledge, the physician could readily infer the important indications for treatment in every stage in the progress of disease. But to enable him to select the best remedy for fulfilling each indication, he needs the same accurate knowledge of the action of each remedial agent that he uses. Otherwise he is constantly liable to give the same remedy in all stages of the disease, or coincidently to give two or more remedies that are more or less antagonistic in their effects, and thereby saturate his patient with drugs with but little apparent effect on the progress of disease.

VAIN ATTEMPTS TO CLASSIFY DRUGS.

Writers on therapeutics very generally classify or group remedies under names supposed to indicate their most prominent physiologic or therapeutic effects, i. e., stimulants, tonics, sedatives, antipyretics, antiseptics, antitoxins, etc. In doing so they have included in almost every class or group medicines differing widely in their modus operandi and in many instances directly antagonistic, i. e., influencing the same structures and functions in opposite directions.

PYREXIA AND ANTIPYRETICS.

Only twenty years since the leading writers on practice of medicine claimed that the chief danger to life in the general febrile diseases was the pyrexia or continuous high temperature. In consequence, every remedy that was found capable of reducing the temperature of the body was classed as an antipyretic and given in full doses, at first, regardless of their mode of action, until we had hydrotherapy or bathing of all modes, large doses of quinin, salicylin, antipyrin, antifebrin and a dozen other coal-tar derivatives, all grouped as antipyretics.

While the hydrotherapeutic measures, as sponging or bathing with cool water, increased the efficiency of both circulation and secretion and thereby reduced the temperature by the natural processes of elimination from the skin, kidneys and air passages, all the coal-tar preparations reduced the temperature by diminishing both natural metabolic and excretory functions, and impairing the elimination of waste products and toxic agents. Thus, the first remedies mentioned reduced the pyrexia by increasing the processes of heat dissipation, and the second by diminishing the processes of heat production and at the same time favoring the retention in the system of the toxic agents giving rise to the febrile disease, and thereby increasing both its duration and ratio of mortality.[1]

A CONFLICT OF REMEDIES.

Abundant clinical experience soon demonstrated that while the coal-tar antipyretics promptly reduced the pyrexia, they with equal promptness lessened the renal and hepatic excretory functions; impaired the leucocytic and corpuscular elements of the blood and diminished general innervation. In other words, they depressed or antagonized the very processes and functions that constitute man's vital resistance to morbid influences or the curative powers of Nature, thereby protracting the duration of the diseases they were given to cure. At the same time the judicious use of cold sponging, bathing and packing as antipyretic measures was found to sustain the curative powers of Nature and to lessen the duration of the whole group of febrile diseases. Thus illustrating the necessity of not only knowing that a remedy is capable of reducing pyrexia, but also by what processes it does so, in order to be able to use it with benefit in the treatment of febrile affections.

FALSE METHODS OF INVESTIGATION.

It was not until the development of physiologic chemistry and both general and microscopic anatomy, during the nineteenth century, aided by the invention of various instruments of precision, that it was possible to determine the actual effects of either the causes of disease or of remedial agents on the various structures and functions of the living body, in either health or disease. During all the preceding centuries the effects of remedial agents were determined by their visible influences on the various evacuations and on the sensations of the patient. Those that caused increased evacuations were classed as emetics, cathartics, diuretics and diaphoretics, according to their influence on the stomach, bowels, kidneys and skin. Those causing the individual to feel warmer, lighter, more exhilarated, with more frequent heart beat were classed as stimulants or tonics. Those causing less sensibility and pain, with more sleep, were called narcotics or anesthetics, etc.

Relying thus upon the objective and subjective symptoms following the administration of medicines without any of the present instruments and methods of determining their influence on the constituents of the blood; the activity of leucocytes; the oxygenation and decarbonization of the blood; the acuteness of nerve sensibility and rapidity of transmission of impressions; and the force of muscular contractions, then classification of stimulants, tonics, sedatives, and narcotics was based entirely upon the subjective phenomena or testimony furnished by the individual to whom they were administered. As alcohol, ether, camphor, carbonate of ammonia, tea and coffee, in moderate doses produced increased frequency of pulse, exhilaration of mind, a sense of heat, less consciousness of weight or resistance, and an impression that more work both mental and physical could be done, they were universally regarded as both stimulant and tonic. They were given indiscriminately or coincidently to patients for the purpose of increasing cardiac and nervous force and thereby sustaining both circulation and innervation in the treatment of diseases. Yet when the doses of alcohol, ether or morphin were increased or frequently repeated, they soon began to induce diminished sensibility, loss of coordination of muscular action, and impairment of both respiration and circulation, and if continued further, paralysis of the heart and cerebrospinal nerve centers and death was the result. Relying upon the persistent statements of those using them, that they were stimulated and strengthened so long as they were able to talk, and yet showing plainly by their loss of both muscular and mental activity that they were being paralyzed, the inference was drawn that in small or moderate doses they were stimulant and tonic, and in large doses depressing and paralyzing.

This double and apparently contradictory action be-

1 Address on Medicine before the American Medical Association in May, 1890.

tween small and large doses has been attributed only to medicines of the narcotic and anesthetic classes, i. e., medicines that exert a direct and controlling influence over the sensibility of the cerebral and cerebrospinal nerves, which include the material organs or structures constituting the seat of mental consciousness, or perception of impressions.

NEW METHODS OF INVESTIGATION.

It was not until the discovery and practice of anesthesia near the middle of the nineteenth century, and the discovery of the inhibitory influence of the vagus nerve over the movements of the heart, and the subsequent invention of instruments for measuring the time for transmission of impressions and the strength of muscular contractions, that the profession were in possession of the means for demonstrating the real action of medicinal agents called stimulants, tonics, sedatives and narcotics, both in large and small doses, without regard to the opinions or impressions of the persons taking them. Experience in the use of the general anesthetics, ether, alcohol and chloroform, soon showed that their effects were manifested first on the cerebral nerve cells latest in the order of development and connected with the manifestation of the highest and most distinctive faculties of the human mind, i. e., the sense of propriety and self-control, and on the inhibition nerves of the heart, thereby producing mental exhilaration and increased frequency of pulse. Continuing the inhalation, the mental hilarity soon gave place to incoherence and unconsciousness with loss of voluntary muscular movements, but still leaving the involuntary functions of respiration and circulation sufficiently active to maintain life. If the anesthetic was increased beyond this stage, the nerve centers controlling respiration and circulation were paralyzed and death resulted therefrom.

Here we see the same consecutive order of symptoms speedily following the inhalations of anesthetics, as we see developed more slowly by giving successive doses of alcohol or other anesthetics and narcotics by the mouth. That is a stage of apparent mental and vascular excitement while the amount taken is small; passing gradually into dulness, stupor and finally profound unconsciousness as the doses were increased or frequently repeated. Thus apparently confirming the long-standing popular opinion, that in small doses all such agents were stimulating and strengthening, and in larger doses, depressing and paralyzing. But this apparent stimulation of the small doses was soon shown to be only the beginning of the paralyzing influence more quickly felt by the inhibitory nerve structures of both heart and brain, by the application of instruments of precision abundantly confirmed by experience in all the ordinary relations of life. For direct experiments by investigators in different countries have uniformly resulted in showing that persons under the influence of only just sufficient doses to quicken the pulse, create a sense of heat and a feeling of exhilaration, i. e., when the individual generally says he feels better and could do more work either physical or mental, the application of the thermometer proves a lower temperature, and the application successively of other necessary instruments show that the peripheral capillaries are dilated, the systolic force of the heart less, the transmission of impressions slower, the strength of voluntary muscles less, and the mental activity retarded. In other words, all the seeming stimulation of the small doses was only the incipient stage of paralysis affecting the very cerebral nerve cells that are the seat of consciousness, and thereby deluding both the patient and the physican who relied upon his testimony. The paralyzing influence of larger doses was too manifest to deceive the physician, but not sufficient to undeceive the patient who, when he had taken so much that he could no longer stand up, and it required two men to support him on his feet, the impression was still running through his brain that he could whip them both.

When we realize the all-important fact, that all anesthetic and narcotic medicines or drugs act primarily on the cerebral and cerebrospinal nerve structures in the direction of diminishing the sensibility of these structures, we see clearly why those taking them are incapable of giving correct information concerning their action, or that of any other agents that may be brought to bear upon them at the same time.

RESULTS OF LATER STUDY.

The more exact investigations of the last half century have not only proved that all general anesthetics and narcotics, such as alcohol, ether, chloroform and opiates are paralyzing to nerve sensibility in direct proportion to the quantity given, but also, that they at the same time diminish tissue metabolism, the activity of leucocytes, the elimination of waste and toxic agents through the excretory organs, and thereby impair all the vital processes in proportion to the quantity given and the length of time they are used. Therefore, instead of even exerting a true stimulant or toxic effect they directly diminish all the processes that constitute man's vital resistance to toxic or disturbing agents, thereby rendering him more liable to attacks of disease, and less likely to recover when attacked, as demonstrated by the experiments of Drs. A. C. Abbott, Reichert, Laiknau and others, both in this country and Europe. And while the positively depressing and devitalizing influence of alcohol, ether, chloroform, morphin and the coal-tar antipyretics has been abundantly demonstrated by well-devised and carefully executed experiments, aided by all the modern devices for securing accuracy of results, the same is equally shown by the ordinary results of their use by all classes of people and in all climates.

LOWERING OF VITAL RESISTANCE.

The history of nearly all severe epidemic diseases, such as influenza, pneumonia, typhoid and typhus fevers, cholera, plague and erysipelas, shows that they more readily attack those who make daily use of alcoholic drinks or other narcotics, and when attacked a much larger proportion of them die, thereby showing unmistakably impairment of their vital resistance. Every authoritative work on either medicine or surgery published during the last half century mentions the habitual use of these same anesthetic and narcotic drugs as important predisposing causes of tuberculosis, septicemia and of fatty and fibroid degenerations of tissues generally. And in every variety of human labor, whether in civil or military life, where total abstainers and even moderate users of these drugs under consideration were required to live and labor side by side with all other conditions the same, the total abstainers uniformly averaged more and better work and yielded much less ratio of sickness and mortality, as shown by the statistics of labor in every country where such statistics are kept; by the annual official reports of the Registrar-General of the British Army, and by the results of life insurance in companies where the total abstainers and the moderate drinkers are designated on their books.

Notwithstanding all the foregoing incontrovertible proofs that the whole groups of anesthetic, narcotic and

internal antipyretic or analgesic drugs, represented by ether, alcohol, chloroform, morphin, nicotin, antipyrin, etc., are true protoplasmic poisons, diminishing nerve sensibility, metabolic and secretory activity, and lessening all vital resistance to toxic agents in proportion to the quantity used, yet they continue not only to be used freely by a large proportion of the profession in the treatment of a great varity of diseases, and still more freely by the non-professional public.

EPIDEMICS OF HEART FAILURE.

The active ingredients in most of the "headache powders" and other popular remedies for migraine, neuralgia, insomnia, and general nervousness, belong to the coal-tar group of antipyretics. The same group of remedies were given freely by perhaps a majority of physicians in the treatment of influenza or la grippe, as it has prevailed since the epidemic of 1889-90. And during no previous epidemic of that disease has there been so great an increase of deaths from pneumonia, bronchitis, and so-called "heart failures," nor were they followed by so many severe and protracted sequelæ, characterized by a persistent sense of weariness, loss of muscular strength and nervous energy, frequent neuralgic and rheumatic pains, with impairments of the cardiac, respiratory, and digestive functions and unrefreshing sleep. A very large proportion of such patients readily refer the origin of their troubles to a severe attack of la grippe, often from one to three years previously, during which they took liberal doses of both anesthetic and antipyretic drugs, and have been taking more or less of the same class of remedies to relieve their pains, lessen nervousness, and encourage sleep at night ever since. Thereby they palliate, for a few hours after each dose, their pains and sense of exhaustion, and at the same time perpetuate the impairments of cardiac, respiratory, metabolic and protoplasmic activity, until many of them become permanent invalids, or die suddenly from so-called heart failure.

RESULTS OF COAL-TAR PRODUCTS.

During the last fifteen or twenty years the discovery of pathogenic bacteria and their ptomain or toxic products as causes af acute infections as well as some more chronic diseases, has induced nearly all recent writers on therapeutics and practice of medicine to represent heart failure as the chief source of danger instead of the excessive pyrexia of the preceding decade. Hence in their chapters, especially on pneumonia, influenza, diphtheria, typhoid and typhus fevers, etc., they emphasize the danger from this cause, and charge the practitioner to guard against it, even from the early stages of those diseases. Consequently, a group of remedies called cardiac tonics and stimulants is now occupying the same prominent position in practical therapeutics as the antipyretic group did two or three decades since; and, unfortunately, it is made to include some remedies more antagonistic in their effects than were any of those in the antipyretic group.

ANTAGONISTICS CLASSED AS SYNERGISTS.

As has been previously stated, so long as the profession were obliged to depend upon the objective and subjective phenomena furnished by the person taking any particular medicine, they called all such as rendered the action of the heart slower, cardiac and arterial sedatives; and such as increased the frequency of the cardiac systoles were ranked as stimulant and tonic. Accordingly, aconite, veratrum viride, strychnin, digitalis, strophanthus, cactus, etc., were all called cardiac and vascular sedatives; while alcoholic liquors, ether, camphor, carbonate of ammonia, tea and coffee were ranked as direct cardiac and vascular stimulants and tonics. But when the modern processes of experimental therapeutics were applied to them it was soon demonstrated that the strychnin, digitalis, etc., so influenced the cardiac, respiratory and vasomotor nerve centers as to cause the cardiac action to be slower and stronger, and more tone or firmness of the arteries, with deeper inspirations; thereby showing them to be true cardiac and vasomotor tonics instead of sedatives. And as their action was not accompanied by coincident anesthetic influence on the cerebral hemispheres, they were readily transferred to the class of cardiac and vasomotor tonics with alcohol at its head. Consequently, we still find in nearly all recent practical works heart failure is set forth as the chief danger in the progress of all acute infectious diseases, to counteract which early resort should be had to cardiac and vasomotor tonics, of which we are uniformly assured that "alcohol, strychnin, digitalis and strophanthus are the most reliable." Thus placing two remedies at the head of the list, to be given alternately or even simultaneously to the same patients and for the same purposes, that have been demonstrated to be as near absolutely antagonistic in their influence on the cerebrospinal, vasomotor, metabolic and excretory functions as any other two remedies to be found in the materia medica. The one, alcohol, diminishing all the functions named, while by its anesthetic effect it renders the patients more quiet and less conscious of either weakness or pain; and the other, strychnin, increasing them, and thus leaving the physician to wonder why the patient tolerates so large an amount of medicines with so little apparent effect. Is it not fully time that such inconsistent medication should be avoided?

TRANSIENT MONOCULAR BLINDNESS.*

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Apart from the momentary blurring of vision from a tired ciliary muscle, or the partial blindness which accompanies migraine, or the periodic dimness of sight which is so frequent a precursor of glaucoma, transient loss of vision limited to one eye is very uncommon.

The attention of the writer was first called to this symptom some years ago by a patient, an elderly clergyman, who was brought to the office in a great state of perturbation by a friend, on account of the sudden loss of sight in the right eye. The blindness was complete for about fifteen minutes and then began to clear, so that by the time the office of the writer was reached, about half an hour after the commencement of the attack, sight was fully restored. A careful ophthalmoscopic examination was at once made, but failed to reveal any cause for the blindness, other than changes in the retinal vessels, which indicated a high degree of arterial sclerosis; thickening of the walls of the arteries and veins and too pronounced a light reflex upon them. The veins were slightly enlarged and pulsated upon the disc. Precisely similar changes were observed in the left eye. There was nothing to note externally beyond a pronounced degree of arcus senilis in both eyes. After the correction of a moderate amount of far-sighted astigmatism, the vision of both eyes was brought to normal.

* Read before the Section in Ophthalmology of the College of Physicians in Philadelphia

Upon questioning the patient it was ascertained that a similar attack of blindness had occurred in the same eye three weeks previously, the loss of sight at that time having persisted about ten minutes. Since there appeared to be no ground for alarm so far as the immediate safety of the eye was concerned, the fears of the patient that he would lose his sight were allayed and he was dismissed with the request that he see his physician at once for a thorough examination of his physical condition, as it occurred to the writer that the blindness was probably of a vascular origin. The patient was the subject of rheumatoid arthritis of marked degree and it was thought not unlikely that there had been changes in the blood vessels induced by this disease. Three days later he returned a second time, even more anxious than before, as he said that the blindness had returned for the third time and that it had persisted, though with intervals of remission, for five or six hours. An ophthalmoscopic examination was at once made with a negative result. His physician reported his kidneys and heart to be normal and his general condition excellent, considering the ravages of the rheumatoid arthritis, which had produced extensive deformities in the small joints. His diet was curtailed and he was placed upon active saline treatment. Two years have now elapsed without a recurrence of the blindness. To sum up briefly: all three attacks occurred in an interval of less than a month; the blindness always affected the right eye; the loss of sight was sudden and complete, the patient being unable to see a lighted match before the eye; the vision of the fellow eye was unaffected. Recovery of sight was rapid, beginning in the temporal field, and was preceded by the appearance of phosphenes. The attacks were not accompanied by headache, nausea or other general symptoms and so far as the patient knew were not precipitated by any unusual activity of mind or body.

Another case of the same nature, a lawyer, aged 30, came under the observation of the writer 7 years ago on account of twitching in the lids after prolonged near work. He had had headache but rarely and had never experienced any former difficulty with his eyes. Examination revealed fibrillary twitching in the orbicularis of both eyes, more marked on the left side, especially when that eye was made to fix. Vision and accommodation were normal in both eyes. At 5 meters esophoria equaled 2 degrees; at 40 cm. there was exophoria of 2; hyperphoria was absent. The eyegrounds were normal. Refraction under mydriasis showed a moderate degree of farsighted astigmatism in both eyes. Under a partial correction of this error the twitching subsided in large measure, but it was found that a full correction was necessary to cause its full disappearance.

About a year after he had worn the correction the patient returned, saying that he had noticed on two occasions that the lower half of objects became suddenly obscured. No headaches followed the loss of sight, though he thought he remembered seeing a play of lights before the eyes. He was unable to say whether both eyes were affected or not. A month later he had another attack in which the right eye became absolutely blind for fifteen minutes. There were no other motor or sensory symptoms, and headache and nausea were absent. Three months after this, after reading, he noticed a dark spot, the size of a fifty-cent piece, over the right eye, when he regarded the flame of a lamp. The spot for a time was directly in the center of vision and then became eccentrix. After persisting half an hour, this phenomenon passed slowly away. One month later the upper half of his right eye became totally blind for fifteen minutes. Vision was then undisturbed for six months when the lower half of the same eye became blind for five minutes. Nine months later the right eye became totally blind again, the loss of vision beginning in the lower part of the eye. In writing of this attack the patient expressed himself as follows: "I was standing on a street corner talking to Mr. M. when a dimness came over the lower part of the right eye. Thinking my glasses were fogged, I removed them for the purpose of cleaning them, when I found that the trouble was in the eye. The sight became rapidly dimmer, so that in a few moments I could hardly distinguish light with that eye. I was feeling perfectly well at the time, and after the vision cleared, which happened in a few moments, I resumed the conversation." A week later he had another attack of dimness in the same eye, the loss of sight being more marked in the upper nasal field. During the last three years he has had several other attacks of blindness in the right eye, the loss of vision usually beginning in the lower part of the eye.

As this patient lived at some distance from the city the writer has never had an opportunity of making an ophthalmoscopic examination during an attack, but in the interval the findings are negative. This patient, though young and vigorous, led a sedentary life, has had several attacks of rheumatic fever and came of a gouty family.

About 16 months ago the writer had the opportunity of studying a third case, that of a man aged 50 years, who consulted him on account of a sudden loss of sight in the right eye. He said that the eye was so blind that he could not see his hand even when it was held close to the eye, for at least one hour, and that during still another hour the fog was so thick that he could barely distinguish large objects. There was no headache or other accompanying symptoms. Since then he has had six other attacks, but not always in the same eye; the third and the last two occurring in the left. All of the attacks came on after taking a nap in the middle of the day. The second and third attacks lasted 30 minutes, and the last three but five minutes. The optic nerves in both eyes were somewhat grayer than is usual, but central and peripheral vision were unaffected. The retinal vessels showed no changes beyond a slight fulness and tortuosity of the veins. So far as could be ascertained, the patient was in perfect health.

In addition to these three, the writer remembers two other cases of a similar nature. One of these, a young woman who was epileptic, said that quite independent of her epileptic seizures she had had transient attacks of blindness in one eye which lasted from two to ten minutes. Loss of sight was sudden and complete; both eyes had been affected but never at the same time. No other symptom accompanied the blindness. Her epileptic attacks were without visual auræ.

In the remaining case, that of a young married woman twenty years old, the blindness, which affected the right eye only and lasted from five to ten minutes, had appeared several years previously and had recurred on an average of once a month. The patient had had several miscarriages and was said by her physician to suffer from uterine disorder. There seemed to be no connection between the loss of sight and menstruation. There was a large patch of choroiditis in her left eye, which looked as though it might have been of a vascular origin.

Though cases of this nature can not be rare, for some curious reason, except where the loss of vision has oc-

curred in connection with embolus and thrombosis of the central artery of the retina, transient attacks of blindness in one eye have escaped description in the text-books, and have received study by but a few. It so happens, however, that these few have all been leaders in the ophthalmologic world, so that the observations which have been recorded are all instructive and comprehensive.

Loring in 1874 was the first to make any extensive communication upon the subject of transient attacks of blindness, although Alfred Graefe, Hedaeus, Rothmond, Secundi, and others had reported isolated cases, where this symptom had occurred in connection with excessive reduction in the diameter of the retinal arteries. Loring based his study upon the observation of five cases, in all of which symptoms previously ascribed to embolism of the central artery of the retina were present. This origin of the blindness, however, he disputed and concluded that, in the train of symptoms classed under the title of embolism, too much significance had been given to the stoppage of the circulation by the lodgment of a plug formed at a distance from the eye, while not enough stress had been laid upon the mechanical actions regulating the supply of the blood within the eye, as well as upon the condition of the walls of the vessels themselves and their contents. In explanation of the blindness, he says: "Might not the blindness be the final result of a series of processes which had been smouldering for some time and which had ended in a stoppage, or at least in a reduction of the circulation. This sudden shutting down of the circulation occurs in other parts of the body and why not in the eyes? A rapid transudation of serum from the capillaries and small vessels might so interfere with the fluidity of the blood as to render it unfit for circulation, or the stoppage might be brought about by some antagonistic condition of the walls of the vessels themselves. In a membrane so delicate as the retina, and one which the simplest experiment proves is so absolutely dependent upon the circulation for the performance of its functions, the slightest disturbance might seem to overthrow the equilibrium of the circulation and thus bring on, just as Donder's experiment does, almost instantaneous blindness."

A few years later (1879), Nettleship added largely to our knowledge of the subject by contributing two cases of repeated paroxysmal failure of sight, in connection with heart disease. He offered the hypothesis that the loss in vision was due to some permanent local disease of the ophthalmic artery or its branch to the retina in conjunction with a feeble stream of blood entering the eyes as a consequence of cardiac trouble.

In 1884 Priestley Smith reported a series of cases, which supported in the main the conclusions arrived at by Loring and Nettleship. The chief point made by him, however, was that permanent, as well as transient attacks of loss of sight from diminished blood supply to the retina, are usually of thrombotic origin and may occur in persons other than those who have organic disease of the heart. In support of this theory he reported a number of cases where he thought the blindness was due to disease of the sexual organs and explained the pathologic sequence in these by reflex disturbance of the circulation in the brain and retina through cardiac inhibition; great reduction and slowing of the blood stream in the retinal artery and finally thrombosis; this latter being strongly favored by anemia and feebleness of heart.

The next communication of importance upon the subject was not until 1897, when Wagenmann reported a case before the Congress at Heidelberg, of repeated attacks of loss of sight in one eye, which finally culminated in the eye becoming absolutely blind. He attributed the blindness in this case to a spasm of the central artery of the retina, and thought that this was secondary to arteriosclerosis, of which there was ophthalmoscopic evidence.

All of these authors, therefore, attribute the loss of sight to some disturbance in the vascular supply of the eye. Indeed, in the absence of any pathological findings in the fundus after attacks of blindness such as have been described, it is natural to impute the loss of vision to some spasmodic affection of the vessels, the spasm not being maintained long enough to cause any permanent change in the tissues.

In all of these cases, the blindness, though complete for a time and recurring in several instances over many years, was transient, and the vision, after being suppressed for a varying interval, returned. It would appear from this that such attacks of blindness are not to be dreaded, that they are not deleterious to the eye and that they have no significance other than the slight annoyance which they occasion at the time the vision is affected. The prognosis, therefore, should apparently be excellent. The surgeon, however, who would not give a guarded opinion in this class of cases would commit a grievous error, for it sometimes happens that the blindness which had before been transient becomes permanent, and as there is no way to differentiate the cases in which this unfortunate result occurs from those in which the loss in vision is only transient, it is wiser for the surgeon not to commit himself as to the final result. Of particular interest in this connection are two cases which have recently come to the attention of the writer. The first, J. L. W., aged 40, a manufacturer, consulted him on January 13, this year, on account of the sudden loss of sight in his right eye two days previously. The patient said that 10 years ago while sitting at the table eating, he suddenly became totally blind in both eyes; that this condition persisted for two or three minutes, vision slowly returning at the end of that time. His wife corroborated this statement and added that, with the exception of the disturbance in vision, the patient appeared perfectly well; his face was neither blanched nor suffused, nor did he complain of feeling faint or giddy. At varying intervals after this, he had spells of double vision, one object being higher than the other. The diplopia would last about five minutes, coming on without apparent cause, and was usually manifested when regarding distant objects. These attacks were not associated with nausea or other general symptoms and recurred every week or so. Eighteen months ago, these attacks ceased and he began to have spells of blindness in his right eye. These came on suddenly and lasted but a few minutes. At times the loss of sight was complete and at times but partial. There were 15 or 20 attacks in all. He was never conscious of headache, nausea or other unusual sensations at the time of the attack. The patient was a large, finely developed man of irreproachable habits, he had always been well, save for vague rheumatic pains in his back and shoulders some years previously. His bowels were regular and an examination of his urine showed his kidneys to be normal. His heart was also normal, though his family physician, Dr. U. G. Heil of West Philadelphia, who referred the case to me, stated that there was evidence of cardiac hypertrophy. About 10 years previously, at the

same time that he had noticed the first interference with his vision, he began to have curious smothering sensations in talking, as he expressed it, as though there were a stiffness of his jaws. This was always exaggerated by the embarrassment occasioned by talking to a number of people.

When inquiry was directed particularly to the loss of vision for which he consulted the writer, it was elicited that the blindness had been preceded by a few minutes of flickering, but that it had then become complete and so persisted for 6 or 8 hours, when it began steadily to improve, until it equaled, as it was ascertained at the examination, counting fingers in the upper part of the field at one-half meter's distance.

As was expected from the history, the ophthalmoscope revealed all the signs of a serious interruption in the circulation of the retina. The optic nerve was swollen and its edges obscured, particularly the upper temporal. The retinal arteries and veins were much reduced in size, particularly the superior branches and the veins in this region were twisted and cordlike. The retina was hazy and swollen above and in the papillomacular region. The lymphatics of the head of the nerve were full. As was indicated by the field blank, that portion of the retina supplied by the superior temporal and the superior macular branches of the retinal artery was blind. The left eye was normal, there being no unusual manifestation in the fundus, vision equaling 5/5.

A diagnosis of thrombosis, or perhaps merely of spasm of the central artery of the retina or of its superior branch, was made and the patient was placed in bed upon active treatment, with a view to reëstablishing the circulation in the retina. Gentle but firm massage movements were made upon the globe, the bowels were freely opened and mercury and potassium iodid were administered in large doses. The vision improved gradually, so that at the end of a few days it equaled 5/40. After this treatment had been persisted in for three days and the vision was slowly improving, one day, shortly after eating, the patient again became suddenly and completely blind in his right eye for several minutes. This was due, in the opinion of the writer, to a spasm in the vessel, and indicated in all probability that the structural changes which had occurred in the retina were possibly due to that cause also, without a thrombosis having necessarily formed in the vessel. The patient has been out of bed now for several weeks, walking about and attending to his business; vision is slowly improving, but as is to be expected, the loss in the field still persists.

The second case occurred in the practice of Dr. Julian C. Dewey, to whom the writer is indebted for the report. In this instance the patient, a healthy man, aged 39, had had repeated attacks of blindness in the left eye since he was 8 years old, the loss in vision lasting from five to ten minutes. The attacks had happened so often, however, that the patient had become quite accustomed to them and their appearance had long ceased to occasion him any alarm, as from his past experience he judged that the dimness would soon pass away. A short time ago, however, he suffered another attack, apparently quite similar to the many which had preceded it, but this time, to his great alarm and surprise, the vision had failed to clear and the blindness persisted. He hastened to Dr. Dewey for relief, but without avail, as the ophthalmoscope, which up to this time had revealed nothing abnormal, showed all the evidences of embolus of the central artery of the retina.

An observation of very great interest in connection with these cases, both from pathologic and physiologic standpoints, is one recently made by Leber, of a case of monocular blindness where there were all the ophthalmic signs of embolus but in which the microscope failed later to reveal any evidence of either embolism or thrombosis. Leber attributed the blindness and the pathologic findings to long-continued spasm pure and simple. The course of both of these cases, until the final attack came and vision was hopelessly lost, was precisely analogous to the apparently innocent group of transient blindness. It is evident, therefore, that the prognosis in all of these cases of transient blindness should be most guarded, as it would appear impossible to predict what the outcome of any one of them might be, whether the blindness be due to spasm and be always transient, whether it be due to a forming embolism which finally destroys the sight by shutting off the blood supply entirely, or whether the same fatal result is attained as in the case reported by Leber, by long-continued spasm, without microscopic change in the vessel walls.

In view of the uncertainty regarding the nature and outcome of these attacks, it is of the greatest importance to prevent a recurrence of them, by combating any tendency towards endarteritis, as it is probable that the spasm in the walls of the vessels is induced by such a process. It has long been a recognized fact that iridectomy, by causing a dilatation of the blood vessels, reduces intraocular pressure. This operation has accordingly been performed in a number of cases of transient monocular blindness with a view to preventing subsequent permanent blindness. Wagenmann would have it performed in every case of this nature. In view of the uncertainty regarding the cause and the course of these cases, it does not seem proper to the writer to subject an eye, which may remain permanently healthy, to an operation which in a certain proportion of instances, no matter how skilfully performed, renders the eye useless for visual purposes. He would, however, insist upon a treatment and a regimen to combat arterial sclerosis. At the time of the attack, the value of nitrate of amyl has been proven, and gentle but active massage of the eye should always be essayed.

PERFORATING WOUNDS OF THE EYEBALL AND SYMPATHETIC INFLAMMATION.*

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Penetrating wounds of the eyeball constitute a fair share of ophthalmic practice. Where mechanical industries expose workmen to accidents, these injuries may represent nearly 5 per cent. of eye patients. Injuries of this kind are always so serious that the surgeon necessarily feels a grave responsibility until the healing is complete. Every penetrating wound is to be considered from three aspects, viz.: 1, the mechanical consequences; 2, the presence or absence of a foreign body, and 3, the question of infection.

THE MECHANICAL CONSEQUENCES.

Eye injuries are peculiar in their immediate results, for nowhere else in the body are so many separate tissues of distinctive individuality crowded into so small a space. A wound which perforates the cornea allows

* Abstract of lectures delivered at the Northwestern University Medical School, with omission of the more elementary details.

the aqueous humor to escape at once, whereby the anterior chamber becomes emptied. The edges of a small and linear wound will adhere sufficiently to allow a refilling within hours, or even less. Larger or irregular wounds may not permit even a temporary reunion for several days. The emptying of the anterior chamber is by itself a transient disturbance, but other mechanical complications are very likely to occur.

As a protection against threatening iritis, the pupil should be kept wide by atropin in every instance of an ocular wound. The eye should be protected from light by a shade and rest of the other eye enforced. A bandage is of object only where a prolapse of iris or vitreous body is feared; otherwise, it is at the best unnecessary. In the case of a diseased and secreting conjunctiva, a retentive bandage may do harm by favoring infection.

Any wound, unless it is strictly central, relatively small or linear, is apt to allow the iris to become entangled. If this incarceration extends only into the internal lips of the wound it causes merely a displacement of the pupil, a trifling disfigurement and perhaps some blurring by a change in the corneal curvature. Much more serious is a prolapse of the iris into a gaping wound or a protrusion beyond it. This always means delayed healing with irritation for at least a period of weeks, and permanent astigmatism even in case of uncomplicated healing. An iris prolapse is besides apt to invite infection. Even if the eye recovers from this at the time, it is in danger of reinfection at some future period. A noticeable number of eyes with healed iris prolapse are lost later by microbic invasion of the scar and entrance of the parasites into the interior through the entangled iris. Every effort should therefore be made to reduce the prolapse of the iris, if seen within the first 36 hours, before the iris has become adherent in the corneal wound. The protruding tag is snipped off clean, as in an iridectomy and the stump in the wound is gently pushed in with a blunt probe if it does not retract itself. As a rule, this can be done under cocain, especially when aided by suprarenal solution. But if the patient's sensitiveness or timidity require it, it is better to narcotize than to leave even a partial entanglement. Oculists are less positive what to do when an iris prolapse is seen after adhesions have formed. After about the third day it is generally not possible to reduce the iris out of its entanglement. A small prolapse without infection may be allowed to cicatrize. A larger protrusion or a bulging of iris tissue through the gaping wound is probably best cut off whenever seen. The slightly increased risk of infection at the time is more than outweighed by the reduced possibility of mechanical mischief and of later infection.

Whenever an implement perforates the cornea, an advance of but 2 to 3 mm. beyond brings it into contact with the lens. Every injury to the capsule of the lens results in cataract. Whatever portion of the lens substance is exposed to the aqueous humor becomes opaque. If the rent in the capsule is minute or linear it may close speedily and the opacity remain localized—sometimes, though rarely, localized enough to permit good sight. A capsule wound, however, which does not close leads to swelling and opacity of the whole lens. If the rent is large enough the cataract will ultimately undergo a spontaneous cure by absorption of the entire lens. This requires at least ten weeks, often more, and can be completed only as long as there is no central core of lens substance sufficiently hard to be called a nucleus. Complete absorption is not to be depended upon after about the 20th to 25th year of life, although it may sometimes take place as late as the 40th year (especially in myopes). During the period of swelling and of absorption of the lens the eye is slightly irritated and sensitive. Very rapid swelling of the lens can cause iritis or even glaucomatous symptoms, viz., hardness of the eyeball with considerable pain, particularly in adults. In such an event it is the best policy to allow the lens to escape through a corneal incision. But in the absence of urgent symptoms it is generally preferred to let the cataract alone until the reaction to the injury or the accompanying infection has subsided and to operate subsequently upon a quiet eye.

Escape of the entire lens through a wound occurs very rarely in the case of perforating accidents unless the whole eyeball is torn open. It is, however, not so uncommon as the result of blows causing a rupture of the ocular tunic. Such a rupture from blunt violence takes place, as a rule, through the thinnest part of the sclera just behind the corneoscleral junction and parallel with the latter. The resulting wound may permit an escape of the entire lens. If the conjunctiva is torn through the lens is lost, but occasionally the intact conjunctiva confines the lens outside of the sclera. A rupture in this region is apt to allow the iris to protrude.

Cuts through the sclerotic coat may permit protrusion of the ciliary body and escape of vitreous humor. Injuries involving the ciliary region have always been especially feared on account of the liability to infection and the probability of its persistence. Loss of vitreous substance to the extent of more than a few drops is never quite indifferent. A moderate loss may lead to later shrinkage with detachment of the retina. A wound of sufficient size to permit the escape of about one-half of the vitreous leaves a poor chance for the preservation of a useful or even a quiet eye. If there is any intraocular hemorrhage or displacement of the lens together with extensive loss of vitreous, the better plan is to remove the eyeball. When a sharp tool perforates through the sclera into the vitreous body a localized opacity will usually occur in the injured part of the vitreous, visible with the ophthalmoscope. Such an opacity, if not due to infection, disappears ultimately, leaving scarcely a trace.

Wounds in the sclera should be closed by sutures put through the conjunctiva, after cutting off any lacerated or protruding tags of tissue. No attempt should be made to disinfect the wounds by chemicals, since thorough tests have shown that this is an impossibility, while the irritation by the disinfectant may prove injurious. The closure by sutures gives a fair guarantee against late infection, which undoubtedly takes place many a time, as shown by the occasional late inflammation following unprotected wounds. A very useful protective measure in the case of wounds of the cornea or corneo-scleral junction is the closure by means of conjunctival flaps as taught by Kuhnt. A flap of conjunctiva with broad pedicle, or sometimes merely an undermined bridge is dissected off peripheral to the wound and slid over the latter so as to cover it. The flap is fastened by delicate sutures, wherever feasible, so as to stretch across the wound. No union takes place between the conjunctival flap and the uninjured corneal surface and hence no opacity need be feared. The area of subconjunctival tissue left exposed by the displacement of the flap heals by granulation with very little irritation and without any risk. The operation is, however, a delicate one.

FOREIGN BODIES.

In the case of any wound of the eyeball, the fundamental question to be raised at once is: whether a foreign body has entered the eye. The answer may be furnished positively by the history one way or the other. If a foreign body is suspected, it is always desirable to see it. If still within the anterior chamber it is directly visible unless covered by blood or later on by an exudate. If caught in the lens it can be seen through the well dilated pupil unless the lens opacity hides it. When back of the lens it is seen on ophthalmoscopic inspection unless it is close to the ciliary region or covered by opacity of the vitreous. The latter lesion itself is strongly suggestive of a foreign body, provided the opacity is not the result of an infective choroiditis. When a foreign body can not be seen its presence can be determined with considerable certainty by means of an *x*-ray photograph in the hands of an expert. Even glass is sufficiently opaque to cast a shadow, provided the splinter is not too minute. Metal chips can be recognized almost infallibly in this manner, always providing the expert has the necessary technical experience. The foreign body can be localized to some extent by taking two views in different planes, but this phase of the problem is not yet perfected. Recent personal attempts to take two plates with different positions of the *x*-ray tube and stereoscopic examination of the pictures have led to very encouraging but not yet completed results.

Foreign bodies of iron or steel can be detected also by their attraction of a delicately-suspended magnetic needle. An instrument based on this principle—the sideroscope—is of decisive value in such cases. Its advantage over the x-ray photograph is its instantaneous readiness, without loss of time. On the other hand, it is so sensitive that it requires careful adjustment and hence is available only to the few who possess it as a prearranged, permanent fixture.

A foreign body which has not done much mechanical damage still threatens the eye if it carries germs into the tissues. We can only expect red-hot chips or shot and fragments from the interior of metals to be sterile; all other foreign bodies are, as a rule, contaminated. It is general surgical experience, and true of the eye as well, that the presence of a foreign body interferes with the normal tendency to recovery from infection. The instances in which an eye harboring a foreign body overcomes an infection and becomes quiet are so rare that we can not look forward to such an exceptionally lucky event when inflammation has followed the entrance of some fragment. Moreover, even when this has happened it is not uncommon to observe another inflammatory attack at some future time after a quiet interval of months or years.

Sterile foreign bodies are often tolerated by the eye, if not too large, at least for a time. In the case of sterile iron chips, Hirschberg has learned that 30 milligrams is about the largest weight that the eye is likely to retain without ruin. Chips of 150, or at the most, 180 milligrams are pretty sure to damage the eye mechanically beyond hope, unless extracted at once. Even immediate extraction does not save an eye if the splinter exceeds this weight. Smooth shot is apparently better tolerated than irregular chips. I have personally known two instances in which shot was retained with useful sight. Sterile foreign bodies are sometimes retained with very little gross change around them. In most instances, they become hidden by a capsule of connective tissue. There are many records of eyes in which foreign bodies were tolerated for long periods of time, until finally a reinfection occurred, sometimes due to slight traumatism. It can be safely asserted, however, that an eye which contains a healed-in foreign body does not endanger the fellow eye as long as there is no externally visible irritation.

Some sterile foreign bodies will ruin the eye by their chemical action. Copper, for instance, in the form of percussion caps, produces an aseptic inflammation with thick, purulent exudate. Iron is sometimes borne indefinitely without reaction, while in other instances it causes characteristic changes known as siderosis. The iris turns rusty brown in hue, especially noticeable when originally light-colored. Chips in the lens may cause opacity with yellowish-brown stains. If the fragment of iron is behind the lens it can lead to localized opacities in the vitreous bodies which appear ophthalmoscopically like minute tufts of white cotton and which may ultimately result in retinal detachment. Most interesting, however, is the direct chemical action upon the retina. A chronic degeneration of the nervous elements takes place with increase in the supporting tissue of the retina. The vessels become sclerosed and change into bloodless white cords. This degeneration starts in the area where the iron chip is lodged, and hence the resulting blindness begins by extinction of the part of the field of vision corresponding to the site of the chip. This toxic effect of iron was permanently arrested in an instance of my own by extraction of the foreign body. As far as the changes have gone, however, they are of a permanent character.

In the case of a fresh injury the foreign body should be extracted at once. Every hour of delay increases the danger of infection. There are many instances in which prompt extraction might have saved vision and prevented inflammation, whereas successful removal of the chip the following day was too late to avert disaster.

Iron or steel can be extracted by means of a magnet with rare exceptions. Removal of non-magnetizable bodies is much more difficult and uncertain and the number of successes on record is small. As a rule, a non-magnetic can only be seized when it is visible in the anterior chamber or when well recognizable with the ophthalmoscope. If the foreign body is beyond reach, the chances of its quiet retention are so small and the dangers of destructive inflammation or even sympathetic extension so large that enucleation should always be done. It is only in the case of smooth (and probably aseptic) shot that delay for a few days is justifiable in order to see whether aseptic encapsulation will take place.

If the patient is not seen until infectious inflammation has begun, an attempt may still be made to save the eye by extraction of the foreign body, provided not much over a week has elapsed since the accident, and provided the inflammation has not reached a degree which has practically destroyed the possibility of a useful eye. The specter of sympathetic loss of the other eye looms up whenever we deviate from these rules. This danger is so formidable that it must be understood by the patient that enucleation must be done if unmistakable improvement does not follow the extraction within three to four days.

When a foreign body is retained by the eye without irritation, the patient should be told of the possible danger. The slightest irritation of the injured eye must be a warning to him to consult an oculist at once.

If a foreign body, especially an iron chip, has begun its destructive chemical influence, there may not be danger of sympathy to the other eye, but the injured eye will ultimately be lost. Hence the magnet extraction is imperative.

The results of magnet extraction have varied so much in the hands of different surgeons and according to the time of operation that general statistics are misleading. Chips which are retained by a quiet eye are almost always extracted successfully without further damage. In fresh injuries seen before infection has developed, extraction has saved more than one-third of all eyes with good vision, about one-third without useful sight, while less than one-third required later enucleation. In proportion as we select for statistics the cases with smallest chips and seen earliest after accident the results improve above these averages, while larger foreign bodies and delay diminish the chances. When infectious inflammation has begun the chance of saving the sight or even the eyeball is very much poorer. But since without extraction eyes seen at this period are almost invariably lost, even the reduced chance should not deter from an attempt at extraction, provided previous delay and the height of inflammation do not render the danger of sympathy too formidable.

This is not the place to discuss the technical details of magnet extraction. Hirschberg's electro-magnet is the preferable instrument on account of its availability and low cost. In the case of foreign bodies not perfectly accessible to the eye or to the ophthalmoscope, the giant magnet of Haab (or any of its modifications) may be successful where the smaller magnet might fail, or may accomplish the same end with less damage to the tissues. But the formidable installment of this big instrument and its great cost, will limit it to the practice of those few who expect such cases in larger numbers.

INFECTION OF EYE WOUNDS.

Apart from its immediate consequences the ultimate prognosis of any wound of the eyeball hinges entirely upon the occurrence or absence of infection. If no infection takes place, the damage done at the time is practically the ultimate damage.* A non-infected wound causes no prolonged suffering and disability and involves no danger of sympathy to the other eye. The irritation produced by a trauma without infection reaches its climax within hours, or a day or two at the most, and then begins to subside. The visible vascularity is but moderate and pronounced only in the area next to the wound. It is a pink blush and not a venous stasis. A direct injury of the iris or a wounded, swelling lens may cause a mild iritis, but no exudate appears in the anterior chamber or pupil. Vitreous opacity, if not of infectious origin, results only if the vitreous body has been directly wounded and it is distinctly localized. When any deviation occurs from this ideal clinical course, we must ascribe it to the entrance and growth of microbes. The difference between an aseptic and a distinctly infected wound is a striking one by the increase and persistence of symptoms and inflammatory lesions. But there are, too, some instances in which the infection never proceeds far and in which the struggle of the tissues with the invading microbes soon ends in victory. These cases present a series of transitions between an aseptic and a distinctly infected course and are sometimes not easily recognizable as infectious complications.

* Except the chemical changes due to soluble foreign bodies or a later shrinkage of the injured vitreous leading to detachment of the retina.

We can distinguish between purulent and plastic inflammation following wounds, although sometimes a combination of the two types is met with.

Purulent infection is caused either by the familiar pus-cocci or by some less common pyogenic bacilli; at any rate, by microbes easily identified. It is usually of violent onset and indicated by pain, tenderness, vascularity and edema of the lid. When it begins in a corneal wound, the edges of the latter become infiltrated. Scleral wounds, however, do not show the infection. A purulent iritis leads to an accumulation of yellow pus at the bottom of the anterior chamber. Abscess of the vitreous is suggested by the early appearance of an exudate in the pupillary space. While mostly progressive, still the purulent process may stop at any of these stages and not proceed further, and in such instances recovery is still possible. An extension of the purulent inflammation into the entire choroid, however, precludes recovery of sight. Purulent choroiditis is indicated by the rapid onset of intense inflammatory symptoms with exudate in the pupil and often with pus in the anterior chamber. The inflammatory edema of the upper eyelid and of the conjunctiva of the eyeball is a specially characteristic sign distinguishing purulent from plastic inflammation. In the most intense form of purulent infection—panophthalmitis—the eyeball is protruded by edema of the orbital tissues. In this form spontaneous perforation of the sclera occurs after about a week's intense suffering. Through this perforation or through a surgical incision scant pus escapes. But the escape does not drain the eyeball promptly, as the condition is not one of accumulation of fluid pus but of phlegmonous infiltration of the tissues. Purulent irido-choroiditis without perforation subsides after some weeks, but always leads to moderate shrinkage of the eyeball. Panophthalmitis with perforation leaves a small phthisical stump after a course of about two months. It has been noted that the shrunken orbs, after a purulent process has terminated, usually become quiet and do not threaten the other eye. But during the active stage we can not predict this relatively fortunate result with certainty, at least in the less virulent cases, since moderate purulent inflammation may coexist with plastic irido-cyclitis.

The purulent infection beginning in the cornea can sometimes be checked by prompt galvano-cauterization of the infiltrated edges. Tapping the anterior chamber, preferably with the hot platinum point, favors arrest of the purulent process if it has not yet invaded the choroid. Subconjunctival injections of salt solution (0.6 to 2 per cent.) are praised by many. Schirmer has lately claimed an almost specific influence of mercury in arresting the purulent process if pushed within the first four days. He prefers inunctions of about 4.00 gray ointment twice daily. His records certainly show a series of recoveries which hitherto would have been considered quite exceptional. But in severe purulent infection all means fail. If the symptoms increase steadily we must terminate the suffering by enucleation or evisceration. If nothing is done the long suffering ceases when shrinkage begins and the remaining small stump is usually quiet and of better size than after any operation. But the pain and the possibility—however slight—of sympathetic disease usually urge operative interference.

Plastic inflammation following wounds is usually not as acute in its onset as purulent infection. The traumatic irritation does not subside, but gradually increases to a degree not explicable by the mechanical dis-

turbances and the climax may not be reached until perhaps the eighth day. In the light of our present knowledge we can only regard this inflammation as an infectious complication, but the microbes causing it have never been identified. As a rule, no bacteria, or at least no constant variety, can be demonstrated. Iritis is usually the first manifestation as shown by synechiæ, often multiple. In many cases this leads to closure of the pupil in spite of atropin. Extensive redness of the whole visible sclera, decided tenderness in addition to spontaneous pain and punctate deposits on the posterior surface of the cornea prove that the ciliary body has become involved. Extension beyond this area produces diffuse inflammation, but with circumscribed spots of more pronounced infiltration of the choroid coat. Clinically, this choroiditis shows itself by diffuse opacity of the vitreous, provided the pupil is still wide enough to permit a view. As the process continues, a solidifying exudate is formed behind the iris and around the lens, which later on causes the lens to become cataractous. Of ominous significance is a decided softening of the eyeball. While this softening leaves little hope for the future, visible shrinkage of the eye destroys all prospect for recovery. At first the shrinkage may only occur in the region of the wound, causing the scar to appear depressed. Later on the whole eyeball becomes atrophic and indented by the pressure of the recti muscles. At this stage the remnant of light perception is usually lost by detachment of the retina.

The infectious inflammation varies in degree and extent in different instances. It may simply intensify and prolong for a few weeks the original traumatic irritation, or it may proceed to complete ruin of the eye. As long as the pupil can be kept wide and fairly clear on ophthalmoscopic inspection, the prospect for recovery is good. With occluded pupil the prognosis depends largely on the persistence of the disease. If the irritation does not begin to subside within less than a fortnight the prospect is doubtful. If any time after this period the disease seems stationary for a full week without gradual improvement the eye is doomed. Except in the mildest cases, recovery can not be expected in less than six weeks. When the eye is still irritated after the lapse of eight to ten weeks, it is doubtful whether it will ever get quiet. Eyes that have begun to shrink may remain slightly irritable for all time, or are at least subject to occasional spells of active inflammation. In all these instances our anxiety pertains not alone to the injured eye but to the awful possibility of sympathetic disease of the other eye.

TREATMENT OF TRAUMATIC INFECTION.

Infection is less likely to occur and less likely to persist when a wound has received proper surgical cleansing and attention from the start. Absolute rest of the eye and of the body should be enforced. The full effect of atropin upon the pupil should be maintained. It is an open question how much can be accomplished by subconjunctival injections of salt solution. I have received the impression that they can hasten recovery when the irido-cyclitis begins to subside, but have never been convinced that they can check the unfavorable progress of the disease. Hot applications seem often of service. The simplest method is to saturate a large handful of absorbent cotton with hot water. In a recent important communication Schirmer has claimed for mercury an almost specific influence upon traumatic irido-cyclitis, provided it is used sufficiently early and energetically. He employs mainly mercurial inunctions, but supplements them with intramuscular injections when urgency seems necessary. In 39 cases of plastic irido-cyclitis he preserved a quiet eyeball in 4 instances and maintained good sights in 23 cases. Such extraordinary results by a competent observer make is obligatory to test his claims in every suitable case. While mercury has been considerably used in European clinics, no one else has hitherto employed it so systematically nor recorded such results. Salicylate of sodium exerts an unmistakable influence upon the infection, provided it is given in sufficiently large doses. Personally, I have learned to depend upon not less than 1.3 to 1.5 grams five or six times per day. In cases of a specially malignant course, however, it can be seen speedily that no treatment is of influence. As soon as the prognosis appears hopeless the eye should be enucleated.

SYMPATHETIC EXTENSION TO THE OTHER EYE.

Any eye injury followed by prolonged inflammation involves the possibility of sympathetic danger to the other eye. It is necessary to distinguish clearly between sympathetic irritation and sympathetic inflammation. The former is a neurosis of a non-progressive nature which ceases as soon as the exciting eye is cured or removed. The latter is an inflammation in the second eye of progressive tendency and not influenced directly by the removal of the first affected eye. A moderate degree of sympathetic irritation is often seen as the result of irritative conditions which never lead to actual disease of the second eye, such as corneal ulcers, staphyloma and glaucoma. The term is, however, used mainly with reference to the annoyance produced in a healthy eye by chronic irido-cyclitis of its mate. The symptoms are sensitiveness to light, watering, fatigue on use and enfeeblement of the accommodation. All the symptoms cease promptly and permanently upon removal of the offending eye. There is no definite relation between sympathetic irritation and inflammation. The former may persist indefinitely without occurrence of the latter, and the latter may begin without preceding irritative symptoms. Still, sympathetic irritation indicates that the injured eye might prove dangerous and should be removed.

Sympathetic inflammation may begin gradually in the form of a mild cyclitis producing slight redness of the eyeball and blurring of sight by the deposition of fine opacities on the rear surface of the cornea. Ophthalmic inspection, if still feasible, often shows at this time inflammation of the optic nerve. In other instances the disease is ushered in from the start as a violent irido-cyclitis with great pain and visible irritation. In either case the fine deposits on the rear surface of the cornea are one of the most constant and characteristic signs. The iritis soon leads to synechiæ more numerous than is usually seen in other forms of iritis. It is difficult to keep the pupil wide by atropin. As the disease continues the vitreous becomes cloudy and sight is still further reduced. Unless checked at this stage the inflammation extends into the entire choroid tunic and follows about the same course as described of the traumatic infectious irido-cyclitis of the first eye. The ultimate outcome in malignant instances is closure of the pupil, exudate underneath the iris and around the lens, cataract, shrinkage of the eyeball and detachment of the retina.

In the more fortunate instances the disease may cease after 3 to 6 weeks' duration. As a rule, it lasts many months. After apparent cessation, relapses, often very tedious or even fatal to the eye, are so common that

no patient can be considered safe until he has been free from irritation for at least a year. The longer the duration the poorer the prospect for the preservation of sight. Yet sometimes a moderate result is observed after a course of many months. Formerly 15 per cent. of recoveries with preservation of more or less useful sight was considered the best that could be expected in sympathetic irido-cyclitis. Of late years the use of salicylates has probably reduced the losses to less than 85 per cent., but no large statistics are available.

Sympathetic disease can occur besides in two other forms in which the prognosis is much better than in plastic irido-cyclitis.

The so-called serous form of cyclitis is characterized by pain, tenderness, ciliary injection and the presence of deposits upon the rear surface of the cornea, and negatively by the absence of iritic adhesions and of visible exudate. As long as the disease retains this character complete recovery is possible, even though it may last many weeks. The prognosis is uncertain, however, as this form may at any time change into the more malignant plastic inflammation.

Relatively rare, too, is another type of sympathetic disease, viz., papillo-retinitis. In this form there are no external signs of irritation. The failure of sight is due entirely to the inflammation of the nerve and retina. Every instance of this form in which the exciting eye was removed recovered promptly after the lapse of some days or weeks.

ORIGIN OF SYMPATHETIC DISEASE.

The only lesion which can induce sympathetic ophthalmia in the second eye is plastic irido-cyclitis of the first. With rare and almost doubtful exceptions it is an irido-cyclitis following an injury or operation; in other words, an inflammation caused by the entrance of certain parasites through a wound. It is not the injury that threatens sympathy. Aseptic wounds, no matter how destructive, never affect the second eye. Nor is it the presence of a foreign body as such. As long as a foreign body is tolerated without inflammatory reaction the second eye is in no danger. If, however, the typical inflammation reappears in an eye hitherto quiescent, no matter whether it harbors a foreign body or not, sympathetic extension becomes possible. The shortest interval ever recorded between the infection of the first eye and disease of the second is a fortnight. But anything less than three weeks is excessively rare. From the fourth until about the sixth week is probably the period in which extension occurs oftenest. But as long as the first eye remains inflamed the danger of sympathy is present. If the inflammation returns after a period of quiescence, no matter how long, the danger, too, returns. I have seen sympathetic disease started by an injured eye which had been quiet for 40 years. It requires a number of days for the disease to extend from the first to the second eye. Hence, it has happened in a small number of recorded instances, that the inflammation made its appearance in the second eye after a dangerous diseased eye had been removed. The occurrence is undoubtedly very rare. Its probability becomes very much reduced after the lapse of a week. Still, it has been observed even as late as the 18th and the 24th day after enucleation. It is a striking fact that all these instances of affection of the second eye after removal of the first ran a mild course and ended in recovery. There are on record a number of cases of alleged sympathetic disease said to have begun at much later periods than four weeks after removal of the injured eye, but when closely investigated these instances can not be admitted as well-identified examples of sympathetic inflammation. Neither the lesion nor the course of any of the forms of sympathetic ophthalmia are absolutely distinctive of their sympathetic origin. The etiologic diagnosis "sympathetic" must be based upon the presence (or presence within a few weeks) of an eye capable of exciting sympathy and an interval between the disease of the first and of the second eye in accordance with general experience.

Sympathetic ophthalmia is not a frequent occurrence. As far as incomplete statistics show it follows traumatic inflammation in probably much less than 5 per cent. But this applies only to present conditions when the majority of dangerous eyes are removed sooner or later. The disease undoubtedly was much more common one or two generations ago, before preventive enucleation was extensively practiced.

PREVENTION AND TREATMENT OF SYMPATHETIC DISEASE.

The practical rules concerning preventive enucleation can be summarized as follows: Enucleation (or evisceration) should be done at once when a penetrating injury has damaged the eyeball beyond hope by crushing, copious hemorrhage into the vitreous, large loss of vitreous with collapse of the eyeball, and especially with dislocation of the lens. When a foreign body has entered the eyeball an effort should be made to save the eye by immediate removal of the body, unless so large that it has disorganized the tissues. If the body can not be extracted, the removal of the eye may be postponed if the body is of iron or steel and can perhaps be reached later, or if small and presumably sterile, like grains of powder or small shot. Chips of glass and bits of rock may also justify a few days' delay with the doubtful hope that they may be tolerated. In all other instances of foreign bodies enucleate at once. When infection follows an injury enucleation need not be considered as long as the inflammation has not extended beyond the iris and as long as a clear ophthalmoscopic view is possible through a wide and unobstructed pupil. As soon as the intensity of the inflammation has led to closure of the pupil or as soon as cyclitis has become evident by deposits on the rear of the cornea, by exudate within the pupil or by diffuse opacity of the vitreous, the danger period has begun. The patient must be warned that the postponement of enucleation beyond the time when the surgeon will demand it means risk to the other eye. It is during the first few weeks of traumatic infection when it is most difficult for the surgeon to decide whether to enucleate or whether to attempt to save the eye, provided the chances are still good for the preservation of sight. However anxious one may be to keep an eye which may ultimately recover with useful sight, it must be remembered that sympathetic disease can be excited by an eye which still has moderate vision. It is only when the pupil is free from exudate and the ophthalmoscope shows a vitreous without diffuse opacity that no fear of sympathy need be entertained. If the inflammation does not subside beyond question after the first week, or if the decline of the symptoms does not continue at such a steady rate that recovery from inflammation is to be expected in about six weeks at the latest, it is dangerous to defer enucleation. An eye which is steadily recovering from the infection may still damage the other, but the probability of such an accident is very small. An eye, however, in which inflammation lingers without change is never worth saving, no matter how little inflamed or how good the remnant of sight.

After apparent recovery of an injured eye it must be determined whether the globe is entirely free from inflammation or not. Lingering disease, not ordinarily noticeable by the patient, is indicated by either tenderness on pressure or ciliary injection or both combined. The ciliary injection may show itself merely by the diffuse engorgement of small veins near the periphery of the white of the eye with relative pallor around the cornea, or it may only amount to a flushed appearance brought on by examining the eye. In either case it indicates the presence of inflammatory foci in the choroid and such an eye may cause trouble if not removed. When a formerly-injured eye becomes inflamed again after a period of quiescence, it is even more likely to cause sympathetic mischief than after the original infection and any extension of the disease beyond the iris should be cut short by enucleation.

When sympathetic inflammation has begun removal of the exciting eye does not affect it to a noticeable extent—at least at the time—except when the disease is limited to a neuro-retinitis. This exceptional type of sympathetic inflammation is invariably cured by removal of the other eye. But the common irido-cyclitis pursues a course apparently uninfluenced and often enough ends in ruin of the eye. Yet a striking observation shows that the continued presence of the offending eye is not without real influence upon sympathetic involvement of the other. Every recorded case of sympathetic outbreak after a preventive enucleation was of a mild type and ended in recovery. Hence the usual plan of enucleating promptly after sympathy has begun is correct. An important exception to this rule must, however, be recognized. An exciting eye with vision or a reasonable prospect of sight should never be removed after sympathetic disease has started, since one can never predict the outcome of sympathetic disease and the injured eye may ultimately prove the better of the two. This has been illustrated a number of times by the patient's refusal to sacrifice the first eye, which in the end turned out to be his salvation from blindness.

The treatment of the sympathizing eye is the same as that of the primary eye. Atropin to the utmost extent, rest and darkness are of prime importance. Local heat always deserves trial. Castor oil is probably not useless. All observers who have used salicylate of sodium in large doses agree as to its pronounced influence. It should be pushed to the limit of tolerance without hesitation. To the salicylate more than to any other measure must be attributed the better results of late years. Mercury by inunction has always been employed, especially in European clinics. Yet it can not be said that there is any positive proof of its benefit in this disease. Schirmer's remarkable success with mercury in the inflammation of the first eye as well as his luck in not meeting a single instance of sympathy in 62 successive traumatic infections, are certainly a strong plea in favor of this agent, although even this can not be considered an absolute proof.

General experience has shown that no operation—iridectomy or removal of cataract—no matter how properly indicated, should be done either in the injured or in the sympathized eye until many months have elapsed after complete recovery from all inflammation. Many an eye with the best prospects for sight has been lost because some operation done too early rekindled the slumbering infection.

In spite of much work by competent authors the parasite of infectious and of sympathetic irido-cyclitis has not yet been identified. No explanation, however, in any way acceptable, has even been offered except the assumption of a microbic origin. The path along which this pathogenic influence travels from the first eye to the second is likewise not definitely determined. The lymph space between the sheaths of the optic nerve from the eye to the chiasm and vice versa is the route suggested by most experimental and pathologic observation.

ACTION OF SILVER NITRATE AND CHROMIC ACID ON CHRONIC GLOSSITIS, UNDER THE INFLUENCE OF THE ELECTRIC CURRENT.

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One is surprised at the number of patients who present themselves for treatment of chronic glossitis with negative results. Under the name of chronic glossitis are included leucoma, leucoplakia, glossitis desiccans, ichthyosis, tylosis or eczema, and keratosis. I need not go into the description of the aspects of the different forms of this disease.

Present knowledge of the etiology of chronic glossitis is so imperfect that therapy for any form of this disease has not advanced proportionately with that of other diseases. In view of the fact that even after the removal of the supposed cause the disease does not readily yield to treatment, I make a suggestion of using 15 per cent. solution of nitrate of silver or 5 per cent. solution of chromic acid under the influence of the galvanic current in cases of chronic glossitis. The manner in which I treat my cases is the following: After painting the patient's tongue with a 15 per cent. solution of nitrate of silver or 5 per cent. solution of chromic acid, the patient is told to hold the wet positive sponge electrode in one hand while the negative metal electrode is rubbed over the painted diseased areas for from ten to fifteen minutes; an excess of saliva is produced and it is caught by the patient or operator holding a large piece of absorbent cotton to the mouth.

I use mostly nitrate of silver, though chromic acid has given me satisfaction. The action of these agents on the tissues under the influence of the electric current may be thus explained: Silver nitrate is first separated into ions, the silver cation, Ag, and the nitric acid anion, NO_3. The silver ion then goes to the negative pole and separates as metallic silver. On the other hand, the nitric acid ion does not separate as such, but decomposes the water present in such a way as to produce nitric acid and oxygen. Therefore, the cauterizing effects of a solution of silver nitrate under the influence of the electric current are due to nitric acid and active oxygen.

In this connection it would be observed, however, that one effect of the current is to cause migrations of the ions in opposite directions, the silver ion toward the negative electrode, the nitric acid ion towards the positive electrode, hence the effects of applying the negative electrode to a surface painted with a solution of silver nitrate, the positive electrode being applied to a different part of the body, is to remove the silver at the negative electrode and drive nitric acid ion deeper and deeper into the tissues where it acts upon the water in the manner above indicated, forming nitric acid and oxygen, hence we would be led to expect better results from the application of silver nitrate in this manner than from the usual method.

In the same way when a surface of the body is painted with chromic acid and the current applied, keeping

the negative electrode on the part painted with chromic acid and the positive on some other part, the chromic acid is resolved into its ions, the hydrogen ion, H+, and the negative ion, CrO_4, would at once migrate, the former to the negative, the latter to the positive pole. Then the hydrogen of the chromic acid is removed at the negative pole, whereas the CrO_4 ion penetrates deeper and deeper into the tissues. In the tissues it is decomposed by water into oxygen and chromic acid, which again is acted on by the current in the manner already described. At the same time, however, another action is taking place. The chromic acid ion CrO_4, and chromic acid itself, finding themselves in contact with the tissue, rapidly oxidize it with the production of the basic oxide of chromium, which is green in color.

Pain of which most patients are apt to complain is greatly relieved by galvano-chemical applications. the hyperemic condition of the tongue gradually subsides, the tissues become more natural, the patches gradually fade away and the tongue assumes its healthy color. From twenty to thirty applications is all that is needed even in the severest cases. Irritant condiments must be forbidden and the digestion attended to.

A curious fact in cases of chronic glossitis is that women hardly ever suffer from this ailment. In conclusion I desire to express my thanks to Prof. J. Kastle of the State College for assisting me in investigating the chemical action of the above-mentioned metals under the influence of electric current.

The following cases form the basis of my article:

CASE 1.—Mr. W. F., aged 31; has been under treatment for chronic glossitis (psoriatic form) for over 6 years, history of specific nature. Did not yield under any treatment. A 20 per cent. solution of silver nitrate was applied with the aid of the electric current: pain and patches entirely disappeared in twenty sittings.

CASE 2.—Mr. C. P., aged 46; leucoma of the tongue of four years' standing. History non-specific. Discontinuance of smoking and diet did not improve the disease. Fifteen applications of 5 per cent. solution of chromic acid under galvanic current greatly improved the tongue. Patient, deeming himself cured, did not return.

CASE 3.—Mr. G. V., aged 26; eczema of the tongue of two years' standing, non-specific. Ten applications of silver nitrate under electric current were administered. Patient discharged cured.

CASE 4.—Mr. J. R., aged 47, keratitis of the tongue, non specific, pronounced by one doctor to be cancer of the tongue. Complained of pain and itching. Eighteen applications of 20 per cent. silver nitrate solution under electric current were given. Patient discharged cured.

CASE 5.—U. R., aged 32; leucoplakia buccalis, non-specific. Fifteen per cent. solution silver nitrate was applied. After ten sittings, patient did not return, although greatly improved.

FOREIGN BODY WITHIN THE ORBIT.

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On April 9, 1901, Mr. J., a retired business man of 79, while striking a blow with a hammer, felt a stinging pain in his left eye. His daughter could find nothing, but although there was no pain and perhaps only such dimness of vision as would accompany any blow, something about the appearance of the eyeball aroused her suspicions. The writer arrived at the house about one hour after the accident. The patient was calm enough and rather laughed at the need of medical attendance. There was still no pain and practically no redness of conjunctiva or sclera. On the cornea, two millimeters below the apex, in the lower outer quadrant, was a very small perforation which was no longer patent but had already begun to repair; there was practically no opaque area. The anterior chamber was restored and in it no blood could be detected nor was the fluid cloudy. The iris, however, showed that the penetrating body did not stop at the cornea; corresponding exactly to the corneal wound there was in the iris (lower outer quadrant) a lacerated perforation. The lens showed that the foreign body had not stopped at the iris; a very faintly opaque line could be traced through it. The vitreous was not yet cloudy nor was there any noticeable path of a foreign body through it and the fundus was quite clear with every detail of the posterior half distinct and nothing abnormal discoverable.

Atropin was immediately used and within four hours a maximum effect was produced. The perforation through the iris was now nearly obscured by the contracted membrane and the lens showed more plainly the path of the foreign body. In fact, cataractous changes had already begun, so that the lens was now noticeably opaque and consequently fogged materially the details of the fundus. By nine o'clock the next morning the lens was so opaque, especially in the lower, nasal quadrant, that effort to study the fundus was abandoned. An *x*-ray photograph was then taken with positive results. The foreign body was demonstrated, but although an effort was made to locate it by different photographs in different planes (Sweet's method[1]) no exact success was obtained.

Twenty-four hours after the injury there was only such slight pain as would be ascribed to excessive manipulation. The hammer had been carefully examined as this was the only substance from which a foreign body could have sprung. Wood, on which he had been hammering, could not have produced so small an injury and, although the head of the tool was so rough as to prevent certainty of finding a bit missing, yet practically there was no doubt that the foreign body was a piece of steel. Had an Asmus sideroscope[2] been accessible it would have been used. Twenty-four hours after the *x*-ray there was slight pain, some redness and scarcely noticeable swelling. Tension was not increased.

The patient was a man of wide experience and of a thorough acquaintance with physicians and surgeons. He invited confidence and his mind was calm enough to consult on his own case with philosophy and judgment. It must be here stated that his health was not of the best. He had had two attacks of pneumonia wherein hope of recovery had been very small; his heart had thereby suffered, so that his attending physicians had warned him that he might at any moment have an apoplectic stroke or an embolism. Life, therefore, although dear to him, was doubly precious if the few remaining months or years could be enjoyed in comfort, with no pain beyond that to which he was accustomed and with no fear of impending operations, either one to remove threatening disaster of sympathetic ophthalmia, or to repair the result necessitated by intra-ocular investigation of the injury already done. Moreover, he had an acquaintance who had been injured in much the same way, but who, after patiently submitting to a magnet operation and life in a dark room for six months, had finally been obliged to lose his injured eye in order to retain its fellow.

The surgeon's attitude to such an accident was explained to the patient. 1. The eye could be

let alone, trusting that nature would heal the wound and allow the foreign body to lie quiescent in its bed, somewhere in the choroid (presumably near the ciliary body); that soon, however, the lens would have to be removed as it was already quite opaque and would render the eye useless until extracted; that after extraction this eye would never be so good as its fellow, and would always have to wear a glass, but would see and be a useful organ, although there would always be danger from the foreign body. 2. To investigate at once with a magnet, to extract the steel, to allow the eye to become quiescent and then to proceed with the extraction of the cataract. 3. To enucleate at once, even before inflammation showed itself; by which treatment he would lose an eye, but would, in all human probability, escape the danger of sympathetic ophthalmia, would be detained but a few days in hospital, have only a few weeks of peaceful convalescence, and within a reasonable time could wear an artificial eye and, excepting for this change, could return to his avocations with as easy a mind and body as he had had before. The patient chose the last method of treatment, which was according to the writer's advice. Sixty hours after the eye was injured it was enucleated, ether being used as anesthetic, and the encouraging prediction was verified, for he remained only five days in hospital, there was absolutely no reaction either local or general, he escaped all pain, and five weeks after the injury he was wearing a glass eye and reading his newspaper as if nothing had happened.

After his return home he suffered a very sudden but mild attack of aphasia and partial paralysis of the arm and leg, due to a small embolism in the left brain, but from this he recovered quickly and completely.

The enucleated eye was immediately hardened in one per cent. formalin solution and when ready was prepared and mounted according to the method of Priestley Smith.[3] The accompanying cuts show nicely the injury to the iris and lens and the path of the foreign body to its seat in the choroid near the ciliary body.

There is due some explanation of the patient's wishes for preferring this third method of treatment and of the surgeon's reason for advising it. On personal grounds he argued that he had only a slight hold on life, and his remaining days he hoped to pass in peace and comfort; he did not fear death, as he often said, but he dreaded above all things the invalidism of the old, which might be a part of the magnet operation, of the subsequent reaction and of the cataract operation, necessary to restore to the eye its usefulness; hanging constantly over him there would be the haunting fear that some sudden change in the eye might precipitate an inflammation, in itself dangerous to both eyes and demanding the enucleation to avoid which had been the purpose of all the treatment. Undoubtedly this feeling was intensified by his knowledge of the experience of that friend who had suffered a similar injury, in whose case the magnet operation had been performed *secundum artem*, but after six months of dark room, pain and idleness, he lost the eye after all. He ended with the remark that one good eye was worth two bad ones in danger, so far as his own future was concerned.

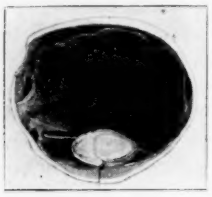
To examine the matter scientifically is to cover the history of modern ophthalmology. The result of the third plan of treatment suggested is illustrated by the history of this case; let us study the first plan, to see how it might have ended. Undoubtedly earlier surgeons were aware of the danger after penetrating wounds of the eyeball and took steps to give immediate relief, but Mackenzie's investigation of the relation between such injuries to one eye and subsequent inflammation and loss of sight in the other (1840) finally established the clinical fact that protection was most surely obtained only by an early enucleation of the injured member; although even in the 1855 edition of his work enucleation is not systematically advocated. The prevailing theory to explain the migration from one eye to the other was until recently that of a ciliary neuritis, which traveled by some undemonstrable means across the brain. This theory is not yet abandoned by all, even of the keenest students, but owing to the growth of bacteriologic enthusiasm, most investigators, headed by Deutschmann, would seek to trace the etiology of sympathetic ophthalmia directly to the poison of microorganisms (or their toxins) along the optic nerve sheath and the chiasm to the optic nerve of the sympathizing eye. The investigations of Alt, Gifford and others support this theory, so that Schirmer[4] assumes the theory as nearly proven. I do not care to discuss the subject here, but use the point to emphasize the statement that with the growth of scientific surgery there has developed in ophthalmology a dread of loss of the second eye after a penetrating wound, especially at the ciliary region—the so-called dangerous zone—of the first eye, and the tendency has thereby been strengthened to enucleate early if the eye has been seriously damaged, even at the risk of seeming haste, because of unwillingness to wait and hope for the tendency of nature to repair the injury within the confines of its own orbit. It took many years of study, however, to reach this conclusion, and the disasters following a waiting policy can be found in most text-books of eye diseases prior to 1860. Granted that there can be cited instances of retained foreign body that did no damage, there remains the equally acknowledged fact that the danger from such retained substances seems not to find a limitation in time, and that, therefore, sympathetic inflammation may even years after work destruction. *Laissez faire* means courting disaster; immediate operation means relief, escape from disaster with the loss of an eye.

Hence enucleation was certainly the indication until the introduction of the electro-magnet into eye surgery. Of course, it had instinctively occurred to man to remove iron by a magnet, but an ordinarily magnetized metal was not strong enough to influence small particles through living tissue and not till the growth of the electro-magnet and its perfect adoption in a sterilizable form did it become of practical service in surgery. The world will never know what a debt of gratitude is due Hirschberg for his enthusiasm for the electro-magnet. As early as 1879 he published his first case of magnet operation in which a successful result was obtained. In 1896 he could rejoice[5] that there had been one hundred eyes saved by this modern means, and he compares experiences before and after the magnet epoch. During ten earlier years, for instance, there was not one good result in treatment of retained penetrating (metallic) foreign bodies. In 10 subsequent years 13 cases showed 7 good magnet results with only 6 losses. Again, in Zürich, 24 eyes were lost before the magnet, while afterward, although 24 were lost, there were meanwhile 11 saved. In 43 cases of magnet operation (Haab), there were only 5 lost by suppuration, whereas hitherto the proportion of such losses was appalling. In 1895 there was only one failure to find iron out of 15 cases.

Hirschberg is, of course, a strenuous advocate[6] of his

small electro-magnet; Haab, on the other hand, champions the large magnet,[7] though acknowledging that both should be placed side by side in the operating room.[8] Undoubtedly this modern method is a step in advance, and will be made still further serviceable as mechanical genius brings aid to surgery; already the Asmus sideroscope[2] is added to this equipment and contributes to our securing favorable results. Briefly stated, this instrument is a delicately adjusted magnetic needle which deviates from its position of rest when it is approached to sympathetic metal. For instance, Goldzieher,[9] when other means had failed, discovered by the sideroscope alone the location of the metal in a recent injury and successfully extracted it, leaving a healthy eye with one-half normal vision.

Such a case as this shows us, however, that there is a dark side which has not been studied with the care demanded by the impartial critic. No one can deny that the vision of an eye is its vital function; destroy this, and the eye, though normal to look at, becomes useless to its possessor. Mar its beauty, as is almost always done by a penetrating foreign body, and it is often not so good as a glass substitute, but when sympathetic ophthalmia may still be threatened by a useless globe, better out with it forever. To save the vision, then, is the object of all our endeavor and, until the magnet operation can give more assurance that it will preserve useful vision, let us acknowledge that enucleation still has its place as an operation of choice. Take Gold-



zieher's case above, in which vision was one-half—splendid, of course, but the eye is no longer perfect. Another case[10] may be cited where the magnet was u with success 24 days after the injury: here success was claimed, but poor vision is acknowledged by the operator. Coppez and Gunzberg[11] report 41 cases with 8 of the foreign bodies located in the anterior, and 33 in the posterior half of globe. Of 15 magnet operations attempted the results were 7 enucleations (one being after operation where sympathetic inflammation had begun), 8 eyes saved; of which one had vision of 2/3, two had light perception and five mere retention of the globe. Kibbe[12] is an enthusiast for the magnet operation and yet he concludes his report as follows: "The precise location of a foreign body within the eye, not directly visible, is impossible by any known method." Of his 11 cases (Haab's magnet) 2 recovered, but the vision is not given; one could count fingers only; 1 had vision of 20/40 with a lens; one of 20/200; one of 20/70; one was enucleated afterward; one had a capsular opacity with hope of subsequent improvement, and one was entirely blind. The other two escaped observation. Velez[13] reports as follows: One case where the piece of iron lodged in the anterior chamber, in which the Hirschberg magnet was used, resulted in a vision of 20/20; another, in the vitreous, vision of 1/10; a third, where one piece of iron was removed but a second piece left (neither *x*-ray nor sideroscope used), subsequent loss of the eyeball; another, where the lens was at the same time removed for the traumatic cataract, vision of 1/10. Sweet and Hansell[14] report a case in a fourteen-year-old boy, with successful extraction and subsidence of sympathetic irritation, four months after an injury, with retention of globe and some vision, but where vision might have been saved had proper diagnosis and treatment been begun at once. Mendel[15] reports a case in which a piece of iron, which had lain dormant four weeks in the retina, was extracted, leaving normal vision and nearly normal field. Barkan[16] reports 11 cases, in which there were 3 enucleations, 8 recoveries, of which 4 had good vision, fingers at 5 feet, 20/70, 15/20, Haab's magnet being used. Sweet[17] has collected from American literature 61 cases of similar injuries. In 16 of these, where no attempt at extraction was made, the injury resulted in enucleation 9 times; 4 patients refused interference with 3 disappeared from observation. In 45 cases, extraction by magnet was attempted. There were 7 failures, resulting in 5 enucleations, 2 escaping observation. In 38 cases the following were the usual conditions: 10 had vision of 6/18 or better (22.2 per cent.); 5 had vision of 6/60 or better (11.1 per cent.); 8 had traumatic cataract (17.7 per cent.); 8 had light projection (17.7 per cent.); 7 had atrophy of the bulb (15.5 per cent.).

Certainly these are grand results. Eyes are undoubtedly saved and the possibilities for the future are undoubtedly full of promise, but the grim fact remains that in many cases the final signature was poor vision or enucleation. From a series, no matter how elaborate, one can not draw conclusions by averages; one must study the individual and the accident befalling him. In the writer's case above, peace of mind and days of life far outweighed the ambition for scientific progress. In a younger man, with his future before him, to whom an eye disabled to half its value, deprived of its lens and condemned, if assisting its fellow, to do so only by an eyeglass, but an eye in which the field of vision was still retained to aid in enlarging the outlook on the world—in him try the Roentgen ray, try the sideroscope, try the Hirschberg or Haab magnet and thank God for them all. If enucleation must finally be done it has cost only a few months of waiting and has meanwhile warded off the blackness of despair. But to an old man, to whom every day means a closer approach to the grave, the advice would be—unless the diagnosis and attack be sure—do not wait; beware of effort that may prove futile; cling to the certainty and be thankful that we know where and even at what cost this is to be found.

So much we have gained, then: eyes that before would surely have been lost, may be saved. True conservatism consists, however, in establishing for the patient's future the greatest comfort within our power.

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SOME ATYPICAL FORMS OF DISEASE.*

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One of the fields of largest promise to the medical investigator of the future is that which holds the secrets of attenuation and malignancy of germs which cause infectious diseases. While laboratory processes have shed some light on this interesting subject, the fact remains that diseases spring up, prevail for a time in mild, severe or malignant form, and finally disappear according to laws that, for all practical sanitary purposes, are yet unknown. On the first appearance of a disease, no one can tell whether it will prove to be sporadic or epidemic, benign or virulent, of widely extended or only local prevalence. Extreme virulence may stamp a brief sporadic outbreak, while a very benign infection may be widespread and of long duration. Or—as happens more frequently—these conditions may be exactly reversed. Nevertheless, the term "epidemic constitution" so long used by the older writers to explain these conditions, or rather to veil their ignorance of them, is no longer employed. We now speak of germ virulence or attenuation. But our actual knowledge, as to why the germs are virulent in one outbreak and benign in another, or why a change of type often takes place during the same epidemic, is about as meager as before.

A practical result of this varying germ activity is a tendency to confusion in our accepted nosology and in the diagnostic recognition of different forms of disease having the same underlying cause. A most remarkable example of this confusion has lately been seen in the smallpox visitation so widely prevalent in this country. There being no established germ criterion in this disease, and therefore no unerring means of diagnosis, it has been stoutly maintained in many quarters—and by very competent medical men—that the disease in question could not be genuine smallpox. Its behavior certainly has been exceptional. No one in this generation having seen any similar outbreaks, there seemed to be valid grounds for questioning the real nature of this easily managed and in most cases harmless affection. It has been so unlike the ultra-contagious, virulent scourge of which we have all read so much and of which many of the older men have seen so much that, judged by symptoms and results, those who denied the identity of this widespread epidemic with the typical form generally assumed, have apparently had substantial reasons for their opinions.

So distinguished an authority as Dr. J. Nevins Hyde,[1] while maintaining that the disease is genuine smallpox, offers as an explanation of its mildness the theory that vaccination and the inherited immunity conferred by ancestral vaccinations have developed a resistance to germ infection and shorn it of its ancient malignity. As a theory this view is certainly pleasing, since it implies that by continued vaccination, in the process of time the human family may become practically immune. Unfortunately, this view lacks the sanction of both history and analogy. If it were true, we should find no epidemics similar to our own in former times, but would witness a gradual subsidence in the severity of smallpox down to the present time. This is not the case. Long before the discovery of vaccination—to quote from Trousseau—the writings of Sydenham, Van Swieten and Borsieri described "anomalous epidemics of smallpox presenting all the characteristics of the modified smallpox of the present day." Curschmann says: "Smallpox in frequency and intensity exhibits the greatest variation in individual endemics and epidemics." *Per contra,* so recently as 1870-71, in spite of the protective influence of vaccination, "the European epidemic carried off from 18 to 25 per cent. and even more of all who were attacked." This seems conclusive that we have been witnessing a phase of the disease altogether similar to what has been seen in the past and that its varying types have not undergone a permanent change.

In this particular, smallpox corresponds by analogy, with other diseases. Consider the plague—a disease of most pronounced physical symptoms. Before the discovery of the plague bacillus the literature was filled with descriptions of pestis major and pestis minor, and discussions were keen as to whether they were the same or different diseases. In 1564, while the epidemic in London carried off 1000 victims a week, the disease was at the same time an everyday occurrence in Paris, and so mild that many people were more afraid of a headache.[2] The one form depopulated whole villages and often seemed to poison its victims to death in a few hours. The other was less to be dreaded than an ague. But to-day all dispute as to the identity of the germ causing the two forms of the disease has ceased.

Every experienced medical man has seen diphtheria and scarlatina behave in the same way. In 1888 I saw scores of children, in fact, nearly all the children in my territory, go through an epidemic of scarlatina so mild in form that most of them continued to attend school. Two or three cases only developed sufficient severity—angina, palmar and plantar desquamation, nephritis, hematuria and dropsy—to emphasize the true character of the disease. The laity, however, named it "the rash," and when I talked to them about scarlet fever, they were incredulous, and wondered why the doctor should take "the rash" so seriously.

Investigation during the last few years has also established the fact that typhoid infection is subject to greater irregularities and departures from the hitherto accepted types than any of the infectious diseases. The recent volume of Johns Hopkins Reports[3]—a veritable mine of wealth for literature and original research on this subject—is authority without further reference for much that is herein adduced. The discoveries of the pathologist and bacteriologist have wholly revolutionized former conceptions of this disease. The point of view now occupied regarding its origin, dissemination, mode of infection, pathological lesions and behavior within the body presents a new revelation, and much that was considered authoritative, well-founded knowledge, twenty years ago is now obsolete. Then typhoid fever was an intestinal disease pure and simple—a primary dothienenteria. The furuncular eruption on the intestine—at some stage of the disease—was held to be pathognomonic. Now, according to Dr. Camac, the liver is believed to be the primary center of infection. High authorities "regard the gall-bladder as one of the surest places to obtain a pure culture of Eberth's bacillus." To what extent the liver may have bactericidal functions is not yet determined, but it seems to be well

* Read before the Central Tri-State Medical Society, Ashland, Ky.

established that pathologic lesions due to the specific organism may appear there in profusion, as well as in the ducts and gall-bladder, without any visible evidence of coincident intestinal infection. Instead of being confined to the intestinal canal, Flexner says the bacilli may be found not only in the liver and bile but also in the lymphatic glands, the kidneys, lungs and circulating blood. They are even observed in the substance of the central nervous system, in the meninges, the bone marrow, and various lesions of the cutaneous system. In any of the above conditions the usual intestinal lesions may not exist. A pneumonia, a hepatic abscess or a meningitis, caused in either case by the bacillus typhosus, may carry off a patient without a particle of intestinal involvement. Flexner also cites the remarkable experience of Chiari and Kraus who, "in 19 autopsies of typhoid fever, found seven instances in which the anatomical lesions of the disease were wanting. These cases, though negative from the postmortem point of view, had all given positive serum reactions." Such cases, as well as those in which the spleen alone is the suffering organ, indicate a liability to systemic infection through the blood current—a true typhoid septicemia. If typhoid may go on to a fatal termination without any visible anatomical lesions, much more may lighter forms of infection exist without definite localization. Hence, in the light of modern research, he must be a bold man who would deny a typhoid origin to almost any obscure febrile affection of an obstinate nature.

The theory long held which attributed the origin of typhoid infection to a contaminated water supply has also undergone some modifications. Other sources of infection are now recognized as of equal danger with water reeking with the products of cesspool cultures. After the convincing experiments which proved that the common fly may be the carrier of cholera, the inference was easy that flies might also disseminate typhoid poison. Accordingly Celli (to quote from Nuttall) observed that flies fed with pure typhoid cultures voided virulent bacilli, and that animals inoculated with these culture flies were likewise infected, "proving that the bacilli which passed through flies were virulent." Veeder once observed a commode emptied of typhoid dejections, placed, without being disinfected, near a pitcher of milk. Flies collected on both vessels and could readily pass from one to the other. Veeder asks: "Is it strange that there were numerous cases of the disease in that house and others in the house next to it?"

The course of a typhoid outbreak in my own practice in the year 1899 tends to confirm this view of typhoid dissemination. The year before, a girl in a family in the country, who had waited on a sister with fever in another neighborhood, came home with the disease and died. No more cases of it occurred that year in this locality. The next year in August the mother had an obscure ailment lasting several weeks, apparently hepatic in character, from which she recovered. In September five of the children sickened at the same time with what proved to be unusually severe typhoid. At the same time four other families along the road leading to the railway station, living on consecutive farms, also developed the same type of disease in one or more cases. Further on towards the station along the same road, still other families developed the disease simultaneously in the territory of neighboring doctors. The peculiar feature of this epidemic was that it appeared about the same time in all the stricken families, and only along this road, a distance of nearly three miles. It seemed that the first family with the case in August, or possibly that of the previous year, must have been the focus of dissemination. The course of the road in this uneven country in no way coincided with the direction of surface drainage. The water supply as a primary source of infection could not be considered. At the time it appeared that the dust was the most likely vehicle for its diffusion—the prevailing winds being in the direction of the road leading to the station. Since the study of Germano, however, who found that typhoid germs do not resist drying and are therefore not liable to be scattered in this way, it seems more probable that flies, laden with the germs, followed the teams towards the station in the direction of the prevailing winds and infected the dwellings by the way. When we reflect that the larvæ of flies are hatched in manure heaps and mature there, it is not surprising that they should have access to typhoid excreta in their breeding places, and be able to infect the food and water supply of adjacent dwellings. Knowing this fact, the origin of many obscure outbreaks of the disease is the more easily explained.

Bearing on the subject of obscure disease types, the recent study of so-called typhomalarial fever made by Dr. I. P. Lyon is also of great value. It will be remembered that the term typhomalaria was added to our disease nomenclature by Dr. Woodward during the Civil war. Following this distinction, about 50,000 cases of this disease were reported among the troops with a fatality of only 8 per cent., while 75,000 of typhoid were recorded with a mortality of 35 per cent. The fatality of typhoid was therefore more than four times as great as typhomalaria. Ever since then it has been the rule with many physicians, supported by many medical writers of distinction, to designate mild, indefinite ailments as malarial, and those of a somewhat graver type typhomalarial.

All this refinement in diagnosis, however, vanishes before the searchlight of the microscope, assisted by laboratory methods. A coincident typhoid and malarial infection is now shown to be a rare occurrence. Going through the literature, Lyon was able to collate only 30 undoubted cases, and these were mostly cases of preexisting malarial infection. He states that "Thayer, in Osler's clinic at Johns Hopkins Hospital, has studied hundreds of cases of malarial fever and of typhoid fever, from the neighboring Chesapeake Bay region and from the Southern States, but has never seen the type of fever described in the South as typhomalarial, and has observed only two cases of true combined typhoid and malarial infection. It seems probable that future investigations will show typhomalaria to be most often a mild form of simple typhoid fever."

So far from being a mild affection, the mixed typhoid and malarial disease presents a high rate of mortality, eleven of Lyon's thirty cases being fatal. This is a mortality rate of over 36 per cent., or five times as great as the mortality from typhoid among our troops in the late Spanish war. This also agrees with the views of French surgeons who describe a true coincident typhoid and malarial infection in Northern Africa and Madagascar as a disease of great severity, attended by a higher rate of mortality than typhoid alone. There now seems no doubt that the term typhomalaria originated in an erroneous conception and that systematic writers on medicine will cease to recognize it hereafter in their nosology.

Viewed in the light of the foregoing facts, what shall be said of that mild endemic disease which has prevailed so extensively throughout the Ohio valley during the past season? Such cases of this continued fever as have come under my own observation could usually be traced to an origin at some point where the Ohio River furnished the water supply. According to the vital statistics of the late census report showing the comparative death rate from infectious diseases of the eleven largest cities in this country, Pittsburg heads the list in the proportion of deaths due to typhoid fever. It is located at the junction of two small rivers which receive the sewage of many towns above and the drainage of a wide expanse of populous territory. It is a great manufacturing city and all the offal of its numerous factories is poured, along with what comes from above, into the Ohio. The towns and cities which line the river below, all drain their accumulated filth and disease germs into the already contaminated current. Should it cause surprise then that the Ohio valley, most of whose towns draw their water supply from this great sewer of five states, usually without adequate filtration, has become the endemic home of typhoid fever? The only strange thing about it is that the disease should be so mild, so atypical in many localities, as to cause uncertainty as to its true nature. In my own territory enough of these cases responded to the Widal test to stamp the disease as genuine typhoid. Neither malaria nor influenza would explain the symptoms and quinia failed to abridge the fever.

Now that we have more accurate means of diagnosis at command, the word typical acquires a new signification. The mild forms which have hitherto been elusive, become just as typical of some epidemics as those less common forms attended with great fatality. The point of view has simply changed, and our conceptions of disease—of typhoid as well as other infections—are correspondingly widened.

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A CASE IN WHICH A LARGE BONE CAVITY WAS HEALED BY MEANS OF THIERSCH GRAFTS.

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Frank Mocha, a farmer aged 60, referred by Dr. Gilmore, was admitted to St. Joseph Hospital, Oct. 21, 1901. The patient had an acute suppurative osteomyelitis of the upper half of the left tibia, which was engrafted upon a chronic inflammation of the same character, which had been of two years' standing. He had the same trouble, in the same place, when six years of age. He was operated on the day after admission, and a very putrid suppurating focus was removed, which included the medulla and cancella of the greatly enlarged upper half of the bone. The erasion extended to the cartilages forming the knee joint. The cavernous portion of the excavation was large and about four cm. deep and three cm. wide. It was filled with pure carbolic acid, which was allowed to remain for about one minute; then the cavity was flushed out and filled with alcohol, as recommended by Powell. It was then well dusted with iodoform and partially packed with iodoform gauze; about an ounce of boric acid being incorporated with the gauze, which filled the cavity. After applying a copious dressing, the constrictor was removed and the limb held upright to limit hemorrhage. An elevated position of the limb was maintained in bed for a time, for the same reason. The outer dressing was renewed on the third day. The wound was repacked on the tenth day and at the same intervals for the whole of the treatment, during which there was no suppuration. Nov. 29, 1901, Thiersch grafts were placed throughout the open portion. The result was perfect. Jan. 6, 1902, the cavernous portion was two and one-half cm. wide and three and one-half cm. deep, but it received grafts with equal success. The grafts were placed upon the wetted outer surface of the limb and slid into the cavity by teasing. They were secured by pledgets of cotton wrung from normal saline solution packed into the cavity, which, when half full, was partially filled with boric acid and the remaining portion packed with gauze. The

Bone cavity healed by means of Thiersch grafts.

dressing remained undisturbed for four days, except for some wettings, which it received on two occasions. It was afterward dressed with a mixture consisting of balsam of Peru one part, castor oil seven parts. Epidermization was complete from the first and the patient was discharged cured Jan. 13, 1902.

Trough-like defects in the shafts of bones have been grafted by the author and plastic operations done for the purpose of limiting bone defects and hastening healing, as described in surgeries; yet to graft a large hollow bone defect, as in this case, is the first experience of the writer and he is not aware that it has been done by others. The happy result justifies the belief that a good service has been rendered this patient, who valued time and early cure more than cosmetic results. To have undertaken to fill this large bone defect by the growth of granulations would have required months, with possible failure

in the end to secure complete closure. A sinus with an unhealthy discharge may be inferred to be prone to cancerous development. While the grafted surface might not withstand much traumatism, were it exposed, it is now sound and is so protected as to be little liable to mishap. To have undertaken to fill the cavity by decalcified bone chips or sponge, would probably have resulted in failure. While this large defect remained aseptic under the treatment instituted, the large quantity of bone chips and blood clots necessary, would doubtless have been too favorable a medium for lurking germs.

When this case was exhibited, the question arose as to the strength of the bone. The prolonged osteomyelitis had so thickened the compact layer as to render it sufficiently strong. But the large surface underlying the exposed semilunar cartilages (the entire cancella having been removed from the upper half of the bone), indicated that there would be a point of weakness, but later granulations so limited this area as to leave no room for apprehension. A recent letter states that the cavity has much reduced since the patient has returned to his home. The photograph I present with the article does not do justice to the size of the cavity, which is fully three cm. deep.

THE VALUE OF STATE CONTROL AND VACCINATION IN THE MANAGEMENT OF SMALLPOX.*

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Vaccination became so popular and universal in all civilized countries in the decades following its introduction that the horrors of smallpox almost faded from the memory of men, and medical writers and teachers habitually wrote and spoke of it as possessing only an historic interest. It is probable that in this age vaccination became so general that more or less inherited immunity existed, as a rule, even where the individual himself had not been subjected to the operation. Then came the reaction against it, and an exaggeration and misrepresentation of the accidents and evils incident to any like remedy used by the laity, as well as by many careless medical men, who had no conception of the value of cleanliness, which philosophic minds should have anticipated. In this the anti-vaccinationist had his day, alongside of him who doubted if Shakespeare wrote his own plays, and the other countless freaks, literary and vulgar, whose only hope of notoriety has been the claim, usually a pretense, of being iconoclasts.

The present epidemic in this country began from cases brought from Honduras to Mobile in the spring of 1897. The early cases were overlooked or neglected, owing largely to the mildness of the disease, which has been characteristic of the entire epidemic. This is probably due in part to the attenuation of the contagium by long prevalence in the tropics, and possibly to some extent to the partial racial immunity before referred to, inherited from generations of vaccinated ancestry, especially in the colored race from the rigid enforcement of vaccination during slavery, and the children of parents recently from Europe. Another reason that caused it to be overlooked was that it was confined strictly to the colored race at the outset. The disease soon reached the mining regions of Alabama and Tennessee, where it rapidly assumed the proportions of an epidemic.

The first Kentucky case came to Middlesboro from Tennessee early in December of that year, and was not recognized as smallpox until many exposures had occurred and a serious epidemic was in full blast. A little later the disease broke out at Jellico, a state-line mining town, and two months later a negro who had contracted the disease at Knoxville came down with it at Richmond. Before a diagnosis was made and the cases reported to the health authorities, another serious epidemic was in full sway. Although the features of these early cases were well marked, and the true nature of the disease was appreciated by the better class of the profession as a rule, ignorant and designing persons spread the report that it was "elephant itch," "Cuban itch," or "African itch," all of which were smallpox in the negro vernacular, names which have persistently clung to the disease in this and other states, much to the confusion of the popular mind. By the rigid application of the usual methods, isolation and enforced vaccination, the disease was stamped out in all of these places, but in a few weeks was imported into other counties and stamped out, and we have moved on in this endless circle in Kentucky for now more than four years. Had the methods of other states been as effective as ours we would never have had smallpox to begin with, or at the worst our trouble would have ended with the eradication of the disease at the places first mentioned. On the other hand, had all of our people been vaccinated at the outset, as the law plainly required, we would never have had a case—unless an imported one—followed by no spread of the disease.

Our official figures show, however, greatly to the discredit of the state, as well as to the medical profession, in my opinion, that only about 15 per cent. of our population was protected by vaccination when the epidemic began, and this chiefly in the cities and towns. In the country districts, practically all were unvaccinated, and if the first case was not recognized and isolated an epidemic was the inevitable result. If the first case was a negro he spread it among his own people, as a rule, and if a white person he gave it to his friends and color, but if its extension was not soon restricted by official action it spared neither race. In the light of an experience with thousands of cases coming under my observation it has shown no preference for the negro race in this climate.

It is doubtful if better opportunity has ever offered for fully and fairly testing the value of official control, in which vaccination is included, in the management of smallpox than during the almost constant prevalence of the disease in some portions of this state in the last four years, or if the history of so many separate outbreaks in country districts has ever been more carefully observed or more faithfully recorded and reported. In that time there have been 405 distinct outbreaks in 112 of our 119 counties, with a total of 11,700 cases and 197 deaths.

In probably a majority of these instances the initial case was an importation from some other state, and often, especially in the country districts, many cases or exposures had occurred before the character of the disease was recognized, or the local board of health had any knowledge of the facts. This was due partly to the mildness of, and low rate of mortality from, the disease, and still more to the fact that we had been so long exempt from smallpox in this country that a generation of doctors had come on which had little theoretical and no practical knowledge of it. As we have efficient

* Read before the Kentucky State Medical Society, at Paducah, May 7, 1902.

boards in nearly every county and municipality in Kentucky, active measures were adopted to bring the disease under control as soon as it was reported, and these efforts were uniformly successful in the end, although, especially in the earlier years, the work was often hampered, and the difficulties greatly increased, by ignorant fiscal officials who refused or delayed the appropriations necessary for feeding, housing and nursing the indigent sick, and using this pretense of economy as a vote-catching device for reëlection to the office then held, or some higher one. This tendency was nipped in the bud by the prompt and unsparing exercise of the power of the State Board of Health to put the town or county in rigid quarantine until such time as proper action was taken by the officials to protect their own people and the balance of the state. To accomplish this seldom required more than two or three days, and soon the intimation that it would be done was all that was necessary.

The literature of smallpox, as contained in the textbooks, is largely based upon observations made in cities, camps, prisons and other crowded conditions, where the opportunities for contagion were so abundant as to constantly render confusion possible as to the results. In our epidemic a large per cent. of the outbreaks occurred in more or less sparsely settled country districts, where each case could usually be traced to its origin and date of exposure, thus affording special chances for studying the natural history of the disease. As a result of these observations the writer has arrived at some conclusions which, if true, and utilized, are of the utmost importance to health officers and physicians in the practical management of smallpox. One of these is that the disease is slightly if at all contagious until the beginning of the pustular stage, which sets in nearly always about the close of the fifth day of the eruption. If a patient with smallpox can be taken from the house, or the other inmates removed, by this time the danger to such persons is scarcely worth considering. If the other members of the family can be thoroughly vaccinated at enough points to make the result certain within forty-eight hours after the beginning of the pustular stage of the first case they will be almost certainly saved an attack. If seen after later exposure than this it is safer to practice inoculation, which I have frequently done, although it is in violation of an almost obsolete statute. I have taken children from the bed and even from the breast of a mother with confluent smallpox up to the sixth day of the eruption, over and over again, and saved them from the disease. In this connection I would like to insist that no person should ever be quarantined in a house with smallpox patients unless they have been previously vaccinated with fresh virus at not less than three places. A violation of this plain and humane rule is the most frequent fault in the management of our physicians and officials, in both town and country districts.

A few words in regard to vaccination and the selection of vaccine virus will conclude this paper. Less would be said upon this branch of the subject if the writer was not convinced that physicians are responsible for much of the lax notions and carelessness which obtains in regard to the importance of universal vaccination. The family physician has it is his power to enlighten nearly every person in this country upon this subject, and he alone can do it in a way that will be heeded.

I would urge that vaccination is the most important operation that most people ever have done, and that if imperfectly done it can only give rise to a false sense of security. If properly done it is usually a perfect protection against smallpox for a lifetime, and is devoid of danger. Varioloid occurs in persons only partly protected by vaccination. The operation should always be done by a competent physician, with strict aseptic precautions, and the person should be seen from time to time until it can be known that a perfect result has been secured. The virus should be introduced in not less than three points on the arm, about an inch and a half apart, only the scarfskin should be scraped off without drawing blood, and the surfaces should be allowed to dry thoroughly before the sleeve is put down. Protectors and dressings are unnecessary if the abraded surfaces are dried well, and in my experience do more harm than good. Directions should always be given to avoid injuring the parts, especially in changing the undercloth-ing, and that the arm should be kept clean. If multiple vaccination is practiced, and three or more good marks are secured, a second vaccination is seldom successful to any degree in after-life, and I have never seen a patient so vaccinated have smallpox in any form in all of my experience. The reason that vaccination runs out is that it was never thoroughly run in, that is, the patient was only partially vaccinated to begin with. If the first effort at vaccination is incomplete it is difficult to secure a perfect result by later attempts.

After careful observation and a large experience I am convinced that the profession should return to the use of humanized virus, so far as it is possible to do so. This form of virus "takes" more certainly, produces less local and constitutional disturbance, and appears to give longer and better protection against smallpox. If the virus is obtained from healthy persons known to the physician, no better source for it can be conceived. The propaganda for bovine virus has always been largely a commercial one, and the sore arms and severe constitutional disturbance following its use is responsible for much of the growing prejudice against vaccination. Owing to its hygroscopic properties, and the consequent difficulty in drying the surface to which it is applied, if for no other reason, glycerinated virus is more objectionable than the dry points, but to my mind the time has come to abandon the use of the bovine virus, except in the emergency of an epidemic, or in starting a fresh stock of the humanized virus.

In conclusion permit me to say that in this day smallpox is a serious reflection upon the intelligence of any individual or community having it. Systematically enforced vaccination has protected every nation, army or community which has resorted to it. It is at least within the reach of every individual in this country who has arrived at the age of discretion. Smallpox is the easiest of all the contagious diseases to stamp out, even when it has gained a foothold. Prompt isolation of those affected, preferably always in a hospital, and the compulsory vaccination and surveillance of the exposed, has never yet failed to bring an outbreak under quick control.

These measures appear simple enough on paper, but their effective enforcement among negroes, and the class of whites who neglect vaccination and have a monopoly of smallpox, will fully test the tact, patience and firmness of the most experienced health officer. If these precautions could be rigidly enforced in the other states of the Union for six weeks we would have no smallpox. If successive generations were systematically vaccinated this loathsome disease would soon be no more known among men.

LUNG DEVELOPMENT IN THE CHILD.

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The prominence of affections of the lungs in various diseases, either as complications or primary elements, gives this organ perhaps a higher importance than any other organ in the body. The emphasis given to tuberculosis is not the result of a mere scare, nor is the fear of it to be characterized as a simple "phthisiophobia" without sufficient foundation. Statistics show the danger only too plainly and until specifics are obtained for the cure of the various diseases the human race must resort to prophylaxis as its chief means of rescue. Even when cure is accomplished the result is obtained by attention to the individual as well as to the causative germ or agent.

It is not the intention of this article to discuss the degree to which pulmonary diseases are infectious, contagious or communicable but, accepting the fact that the lungs are a fertile field for the cultivation and spread of infection, to note a few points in which we are lax in employing the ounce of prevention, relying too much upon the pound of cure, which, in many instances, is short in weight.

The individual is often forgotten in the eager pursuit of the respective causative germs. There are two elements to be considered in etiology and prophylaxis: the external agencies, and the individual himself. It is difficult to decide which is the more important. Pathological conditions always depend upon the relative strength of the infection and the infected. Were it not for the vital resistance of the human tissues against external invasion, our history would have been written long ago. Prophylaxis for all infectious diseases can be summed up in the one principle of weakening the invader and strengthening the invaded. Relatively too much strength is expended in weakening and destroying the invader, leaving the individual fearful and defenseless in the presence of his self-induced weakness. Civilization is thrusting upon us our coughs and colds, our contracted chests, enfeebled stomachs and weak limbs; and often the higher in the scale the weaker is the resistance. The veterinary hospital gets a majority of its inmates from the highly bred animals, not alone because of their higher value—hence the attempt at preservation—but also because of their lack of resistance. Dr. Forchheimer of Cincinnati recommends for infant-feeding, not the milk of the highly bred Jersey cow, but that of the common, long-horned, sturdy, resistant, mountain cow—for her power of resistance. All nature is aggressive and it merely becomes a question of what forces shall conquer. Why do so many infants die? Lack of resistance. Prophylaxis is of most value i infancy and old age where resistance is at a minimum. The larger the city in which the child has his habitat the less likelihood of his winning in the contest, not alone because the strength of invading agencies is increased, but perhaps even more because his own powers of resistance are minimized. In the schools of our large cities where brush, broom and dusting cloth effectually scatter any infection to all parts of the room and where children of all grades gather from all sorts of environment we often find an ideal culture medium for infection. The value of space has crowded a large proportion of our city urchins into tenements where sidewalks and courts serve for playgrounds, where breathing space is at a premium, where the outlook is often so limited that the weakest arm scarcely dares to cast a pebble for fear of breaking windows, where echoing voices jostle each other in their struggle to reach the open air and where eyes accustom themselves to their narrow quarters and become near-sighted. Even where public parks exist the omnipresence of the "keep off the grass" and the stealthy encroachment of public buildings often rob the child of his natural gymnasium. His life is crowded with "dont's" until spontaneity of life is lost. Autopsy can pronounce his lung "a city lung" by the accumulation of soot; osteology distinguishes the country maid from the society lass and pathology establishes her museum in the slums where moral, physical and mental development are under the handicap. How far governmental interference is admissible or possible is a debatable question but there is always one place where corrective and regulative measures are possible to a certain degree, viz., in the schools. Education should be more than a mental development of the child. The magnitude of the task of providing adequate facilities for gymnastics for the children is a serious obstacle and yet the results would justify the attempt. Above all, children must be good animals. The blessings of a gymnasium are only too plainly seen by a comparison of the lung capacity of children in private and public schools. The advantage of the former, so far as development of the lungs is concerned, is enormous. The effects of a general physical culture on the body as a whole need no comment. One of a series of tests[1] taken by the writer on the school children of New Haven was the determination of the lung capacity for the respective ages from 6 to 17 inclusive. The data are based upon 100 children for each age. These children were without the advantages of a gymnasium and regular training therein. The accompanying table and chart represent a comparison of these results with those taken by Dr. Wm. G. Anderson of the Yale Gymnasium from children in private schools near New York. His results represent an average of 600 children at each age from 6 to 15 inclusive:

COMPARATIVE LUNG CAPACITIES FOR PUBLIC AND PRIVATE SCHOOL CHILDREN.

Age.	Boys.		Girls.	
	Priv.*	Pub.	Priv.	Pub.
6	64	57.1	35	49.2
7	80	65.6	40	58.8
8	88	71.8	48	64.2
9	106	82.7	65	73.4
10	124	92.8	80	80.3
11	144	106.3	106	83.6
12	150	117.2	125	104.6
13	168	124.4	136	108.1
14	188	120.4	150	107.8
15	205	170.3	155	116.3
16	....	189.3	....	119.8
17	....	202.5	....	124.0

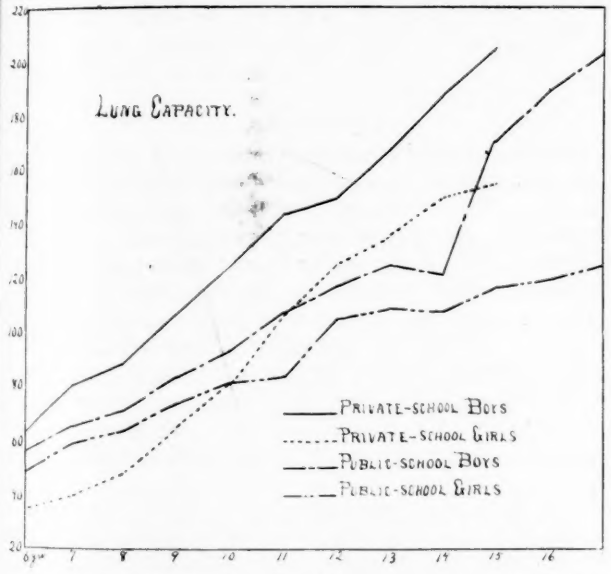
* Priv.—Lung capacity of private school children in cubic inches.
Pub.—Lung capacity of public school children in cubic inches.

The children from whom his data were taken underwent a daily training in the gymnasium, and while on an average his children at 6 years of age had a slightly smaller lung capacity than the public school children, the increase in development of the former was so rapid that the children of the public school were soon excelled. At the age of 15 private school boys had a lung capacity of 205 cubic inches; public school boys only 170.3 cubic inches, the former having the advantage of 35.3 cubic inches. The average private school boy at the age of 15 had a larger lung capacity than the public school boy at 17. In girls the difference is even more

1. Studies from the Yale Psychological Laboratory, vol. ii.

noticeable, for at 6 the girls of the private school have a smaller lung capacity than those of the public school, but they develop so rapidly that by the age of 10 the private school girls have a larger lung capacity; and thereafter the rapid development continues so that at the age of 15 they have attained 155 cubic inches, while public school girls show only 116.3 cubic inches, the former having the advantage by 38.7 cubic inches. The average private school girl at 15 has 31 cubic inches more lung capacity than the public school girl at 17. The chart shows an enormous difference in the development of the two classes of children. Had the lung capacity been larger at all ages in private school children it might be argued that the private schools received the children of the better classes and those who had athletic ambitions, but when it is remembered that at 6 years of age the average lung capacity of private school children is less than that of the public school children and that this relation is reversed within a year or two the argument in favor of the gymnasium in public school work would seem convincing.

The relatively slight increase in the lung capacity for girls subsequent to the age of 12 would seem to be a significant criticism of the prevalent fashion of lacing



rather than an indication that development of the lungs as such had in large measure completed itself previous to that time. Remembering the contracted breathing of the phthisical patient the above chart speaks loudly in favor of more attention to the physical in our schools. Mind and body are so intimately connected that neither may safely be neglected for the advantage (?) of the other. The value of deep inhalation is appreciated by insurance companies, for in all examinations they demand that the chest expansion be recorded; health resorts for the phthisical seek the places where the lungs can be thrown open, as it were, to the outside air; modern therapeutics in all lung diseases pleads for free ventilation and abundance of fresh air; every one knows that an organ in disease atrophies and yet we seem afraid of taking long breaths; seldom do we find the necessity of raising our voices above the loudness required to be heard across the reception room, and, to add to the handicap, fashion binds upon us its fiendish inventions calculated to restrict our natural freedom. We seem to have forgotten the truth that in order to be good men we must be good animals. As a rule the acute infectious diseases are acquired and not inherited and a great majority of diseases of the respiratory system can be traced to insufficient consumption of fresh air. I repeat—nowhere is prophylaxis of more value than in the child. "As the twig is bent," etc. The place to attack the problem is not in the chest that has already surrendered but in our public schools where every child for a number of years is to a certain extent under public control. Gymnasia are a poor substitute for the ball field, swimming-hole and coasting hill, but let us arbitrate and compel the best terms possible from the civilization which refines to destruction.

ROTARY LATERAL CURVATURE AND POTT'S DISEASE OF THE SPINE.

DIFFERENTIAL DIAGNOSIS AND RATIONAL TREATMENT.*

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NEW YORK CITY.

From the time of Hippocrates, 500 B. C., until the present time the history of spinal surgery has been indissolubly linked with the general advancement of surgical knowledge. At no time, however, during all these centuries, so far as the writer can ascertain, has there been anything like an unanimity of opinion among medical men as to the proper treatment for these cases. In the time of Percival Pott all cases with kyphosis, even rapidly increasing, attended or unattended with abscess, were classed indiscriminately as Pott's disease. In this generation we have scarcely less erroneous statements from men who claim it is possible to cure cases of lateral curvature of the spine even after extensive bone changes have taken place. It is scarcely necessary for me to say here that these views are not now endorsed by representative surgeons. New ideas, however, even when sustained by unlimited pathologic and bacteriologic research and clinical experience, are often slow of adoption, and it is on this account that I purpose here to briefly differentiate, not only in the etiology and pathology, but also in the treatment of these two time-honored bugbears of the profession.

Not all cases supposed to be such are Pott's disease. Deformity, similar to that caused by tuberculosis of the spine, is seen following absorption from the Peyerian patches of the intestines in typhoid fever. This condition would be readily discovered in connection with a history of other typhoid symptoms. Another rare affection of the spine, resulting in kyphosis, is caused by the inoculation of the germs of actinomycosis. We also recognize a condition closely simulating tuberculous infection in acute osteomyelitis. This, however, differs from the more common condition, by its rapid onset and virulent and destructive course, in marked contrast to the insidious approach of tuberculosis, sometimes covering months and months. The germs of osteomyelitis will do in a few days what tuberculosis, as a rule, will not accomplish in many months.

These four conditions, each distinct, yet resembling one another in a few general symptoms, are commonly classed together as "Pott's disease." The consideration of those conditions of chronic stiffness of the vertebral column, as Bechterew's hyphosis and Marie's spondylosis rhizomelia, I purposely omit in this connection.

* The author of this paper died at Niagara Falls, N. Y., June 9, having been taken ill on the way to the Meeting of the Association. He had intended to read this before the Section on Diseases of Children.

Their pathology, closely resembling rheumatoid arthritis, or as Dana claims, arthritis deformans, is not yet clearly defined.

ETIOLOGY.

The etiology of true tuberculous spondylitis is due to an infection of bacillus tuberculosis into an area of previous inflammatory action. This theory was taught by Phelps, in this country, and by Billroth, on the Continent, some years ago and is now the one generally accepted the world over. That the bacilli inoculate tissue not embryonic is impossible. The result is a slow growth of tuberculous tissue. As the area of inflammation extends inoculation takes place with destruction of bone. This was formerly known as caries, which is a term that means nothing and will eventually be dropped from the nomenclature of the subject.

The germs of tuberculosis enter the system primarily, as a rule, through the lymphatics. As described in an article on this subject written by the author and Dr. Phelps, a child, playing in the backyard of a tenement house, in an atmosphere contaminated by germ life, caused by the old woman beating the carpets from an infected room where an individual had died of tuberculosis or osteomyelitis, inhales the spores of the germ.

These spores are immediately absorbed by the lymphatics from the mucous membrane of the pharynx and the trachea and carried to the neighboring lymphatic glands. The lymphatic glands are rich with cells, and are a good soil for the reception and growth of the germ. The cells, or phagocytes, of the lymphatic glands are at once attacked by the germs and destroyed, until the entire gland is converted into a pus or tuberculous cavity, depending upon the kind of germ absorbed. These are the large glands seen in the necks of children and called by the older authors "strumous, or scrofulous gland." Ulceration now commences in the gland, burrowing takes place in the direction of least resistance. The gland is surrounded by a vascular network of veins and arteries. When perforation of the gland takes place from ulceration, its contents may discharge directly into the vein; thus it can readily be seen how the circulation becomes contaminated with germ life from the reservoir which is constantly discharging into it. Now, if the child playing in the backyard receives a slight injury of the spine, at once inflammatory action begins at the point of lesion already described. The blood being loaded with germs of infection carries them to the point of injury. The pathogenic germs, finding a fit soil for their reception and growth, attack the normal new inflammatory material and convert it into a diseased condition, with a formation of pus or a tuberculous abscess. From this point of local infection the pathogenic germs find their way into adjacent tissues, destroying them as they advance and enlarging the diseased area. Should the body of the vertebra be involved, as is the rule in a majority of cases, its partial destruction is simply a matter of time, *unless* the destructive process is checked by appropriate treatment, the focus of disease circumscribed, and ankylosis of the affected vertebræ accomplished.

Why is it that one child may receive a blow, but will not develop the disease, while a second child also receiving an injury will develop it, is an interesting question. It depends on the relative disease-resisting power of the cell life of the individual. In the one child the embryonic cells resist the attack of germ life, while in the other they succumb to the invasion of disease.

Rotary lateral curvature differs from tuberculosis of the spine. It is never produced by inflammation or disease of the spinal column. The etiology of these curves occurring high in the vertebral column, either in the dorsal or cervical region, is, I believe, nearly always congenital or rachitic. A rapidly-growing child who sits in a faulty attitude or stands in such a position as to constantly curve the spine, will often develop rotary lateral curvature.

Curves that occur in the lumbar region are usually due to such a cause as this, or to a shortened limb, or tilted pelvis. Paralysis of certain muscles may also be an important factor in the etiology of these deformities. I have known cases where great deformity resulted from the intercostal adhesions, following the absorption of a pleuritic effusion. Deformity of this kind is seen in the dorsal vertebræ, for the reason that the spine bends where there is a change in the ribs and in the muscles between the ribs.

The deformity in lateral curvature is produced by absorption of the vertebra from pressure. As the spine bends, rotation takes place always in the direction of curves. The body of the vertebræ always rotates toward the convexity of the curve. Then we say that nearly all cases of lateral curvature are to be considered as cases of lateral rotary spinal curvature. When more than one curve occurs it is then called double lateral rotary spinal curvature.

SYMPTOMS.

One of the most common symptoms of lateral curvature is the projecting shoulder-blade and the drooping shoulder. These are cases that find their way to various bandagers, who adjust worthless appliances, and the apprehensions of the mother are put at ease by such charlatans, until after a year or two when the orthopedist is consulted; he finds an incurable curve in the vertebra produced by absorption. Then the projecting shoulder-blade, the drooping shoulder, the prominence of the ribs on one side of the vertebra as the patient is bent forward, the absence of pain and spasm of the muscles, and the general good health of the patient are symptomatic of curvature.

In a case of tuberculosis of the spine the surgeon should always make a diagnosis before deformity occurs. To do this in a child only a year and a half old is sometimes difficult. In these cases, as a rule, there will be night cries; screaming of the child when the mother lifts it; bending forward of the body eliciting pain, anteriorly from the point of disease; the patient, placed upon its back, when lifted to an upright position with the hand under the head rising with a rigid spine; and in a sitting position, you standing behind it, the patient presenting a rigid spine when bent from side to side. If the disease is located in the lumbar region the good old doctor has probably treated the case for worms; if in the dorsal region for asthma. But when the symptoms which I have enumerated are present, although there is no deformity as yet of the spine, you could be quite certain in making a diagnosis of Pott's disease.

If the spine is flexible in its continuity there is no Pott's disease. If the spine is rigid it is certain to be present.

Bone Changes.—On one side the bodies of the vertebræ become absorbed by pressure, but on the opposite side they are normal. There is not a single straight spine in the world. If there were, the person would break his head every time he jumped six feet. Every

lateral curvature, to be cured, must have compensating curves so as to allow a vertical line to fall through the center of the curves and to fall inside of the base formed by the feet. In some lateral curvatures, as in rickets, the deformity is due to pressure. Ossification, as in the ossified man, about which so much was written in the lay press during the past summer, is produced by central nerve-lesions.

TREATMENT.

Treatment must be based on rational principles. I would treat lateral curvature with gymnastics and a support to relieve pressure. The support should be removed night and morning. Proper gymnastic exercises should be given and this too while the support is being worn. The corset should be applied before arising from bed in the morning, and not removed until the patient is again in bed upon retiring. The method sometimes practiced of giving exercises to curvature patients while without their spinal support is not correct.

In Pott's disease the treatment is operative as well as mechanical and constitutional. The new operation of forcible replacement, by Calot, France, was done by Hippocrates, was revived in the time of Ambrose Paré, in the 15th century, and again in this generation by Hadra, Galveston, Texas. This is a procedure adaptable only for selected cases, and at the hands of experienced operators. Long ankylosed cases, or cases in which abscess with much deformity exists, should not be broken up. In the early history of some cases forcible reduction has been of much benefit, but it is an operation attended with great risk.

The usual routine treatment consists of extension and fixation. The manner of accomplishing this end is along the same lines as in the treatment of rotary lateral curvature. The support is, however, not to be removed and calisthenics are forbidden.

It is a very good plan to always determine the extent of bone changes before beginning treatment. Bending forward shows it. A straight line along the back demonstrates the extent of deviation. The diameter of the vertebral column is two inches. If a displacement of one-half of this occurs to either side there is unstable equilibrium and exercise can not correct. The patient must be braced so as to produce stable equilibrium. A child of 3 years can not be properly braced, because the pelvis is too small as compared with the thorax and the brace will slip. Put on a Bonnet's cuirass, or better, Phelps' plaster-of-paris portable bed, which is good also in Pott's disease and hip-disease. Dr. Phelps got the idea from observing an Indian squaw carrying her baby. In spinal braces, when the band around the pelvis is narrow and small, the appliance will tilt. I believe suspension and then fixation is necessary. This is the principle of one brace invented in 1754. The Hessing corset was invented in 1764. Many apparatus modernized were used more than a century ago. Sayre was the first man in this country to make a suitable apparatus for Pott's disease or lateral curvatures, namely, the plaster-of-paris corset. It is good, but to its routine use in all cases of spinal disease, of all kinds, I have objections—it is heavy, cumbersome, unclean, and it wears out and so changes have to be made; but it is the best of all braces. Then there is the substitution of other materials for plaster-of-paris, such as leather, and cowhide, which proved unavailable, and wood, wire, celluloid and paper, none of which is of any value in these cases. A spinal support must be *absolutely unyielding*, or it is entirely useless.

If the disease is located above the third dorsal vertebra, no corset or brace, without the aid of the jury-mast, can be adjusted so as to be a support, owing to the fact that the weight of the head and shoulders operates upon the point of disease or curve. In such cases the jury-mast must always be so adjusted as to transmit the weight of the head through the corset to the hips. The jury-mast does not lift the head but serves to tip it backward, transmitting the weight to the transverse processes and relieving the anterior border of the vertebral bodies, where the disease is, in the majority of cases, primarily located.

To make proper corsets from plaster-of-paris suitable material must be used. A hospital crinoline, which has the proper amount of sizing and material and a total absence of indigo is best. This cloth and fresh plaster-of-paris, when properly united, makes a perfect plaster bandage. Tear the crinoline into strips six inches wide and six yards in length, draw the cloth over a pile of plaster-of-paris, on a table, and with the hand rub off all excepting enough to simply fill the mesh of the cloth, roll the bandage loosely, that it may take water quickly, and it is simply perfection.

A tight-fitting shirt must now be adjusted to the patient. The shirt which we now use is a long stocking and costs about 25 cents a yard. The life or an ordinary jacket made of plaster-of-paris is about three or four months. They last longer in cool weather than when the patient is freely perspiring. Rapid setting of the plaster is necessary, because the hand holds it to the corrected position of the deformity. This material, with the stockinet, completes the materials necessary to make a perfect corset. The crinoline costs 6 cents a yard, the plaster-of-paris 3 cents a pound, and the stockinet 30 cents. A corset for a child 6 years old should weigh not to exceed one and one-quarter pounds, and for an adult two and three-quarter pounds. This makes a support as light or lighter than the steel brace, and it supports as a steel brace can not.

When the patient is suspended in Pott's disease of the spine, and a jacket properly adjusted, he is at once relieved from a condition of pain and suffering, and to such an extent that any amount of pressure upon the shoulders does not produce pain. In rotary lateral curvature of the spine, a plaster corset with lacings is made to fit this suspended and straightened position. After the corset has been adjusted the patient is three inches taller than before its application.

If the patient can afford the greater expense I always advise the aluminium corset, for, although the first cost is greater than for the plaster-of-paris support, yet, before treatment is ended, the metal appliance will have proved the cheaper. It is practically indestructible. Phelps calls it "the end of the law in spinal bracings," and I believe his statement to be correct. I do not suggest the aluminum corset as a substitute for plaster-of-paris in acute Pott's disease and lateral curvature. I suggest it rather to take the place of such braces in cases requiring permanent bracing, or in individuals who are desirous of securing a support at any time which combines durability with lightness and comfort. As soon as a case of lateral curvature has been arrested, or the greatest amount of benefit has been derived from treatment, the aluminum corset will then be found to be a most agreeable permanent support.

The aluminum corset has the following qualities to

recommend it to the patient: 1, lightness; 2, durability; 3, it is thin and does not interfere with the form and clothing; 4, being extensively perforated makes it the coolest and most agreeable of supports, and 5, the patient can wear it while bathing. An ordinary corset weighs from one to two pounds, depending upon the size. To prevent cracking and to protect it from perspiration it is covered with a waterproof enamel, which is applied by heat.

Steel corsets, somewhat similar to those of aluminum, were used by Ambrose Paré in the 15th century. Steel is, however, too heavy for practical use. It was necessary, too, to hinge the two halves of all metal corsets on both sides, beneath the axillæ. The duplex hinge used in our aluminum corsets at the New York Post-Graduate Medical School and Hospital was devised by Dr. Phelps, and by means of it the unequal planes of the corset are nicely hinged, enabling the patient to remove and re-apply the apparatus without assistance.

To make an aluminum corset, first make a plaster mold of the body. Fill this, and from the cast thus obtained an anvil of iron is made. Over the metal anvil the aluminum is hammered into shape. It takes two skilled workmen two weeks to make one of these corsets. When fitted to the body the corset is shellacked with a preparation that makes it impervious to perspiration. With an apparatus of this kind the patient can go in bathing. In Pott's disease the same kind of a corset can be used, if it is put on with wire lacing and kept on. In lateral curvature cases the corset is to be taken off daily and the patient instructed in proper gymnastic exercises. In Pott's disease the spinal support is not to be removed except at the surgeon's directions.

CONCLUSION.

In summing up, then, I may say that in rotary lateral curvature, in my opinion, the following points are to be observed:

1. Mechanical support and proper gymnastic exercises are to be combined.
2. The exercises are to be taken while the patient wears the support.
3. The apparatus is removed while the patient sleeps.
4. Where the deviation is more than half the diameter of the vertebræ an unyielding support is imperative.
5. After absorption of bone has taken place the primary curve can not be eradicated; the "cure" lying in the establishment of compensating curves, which maintain the equilibrium of the spinal column.

In tuberculosis of the spine, on the other hand, remember the importance of the following:

1. Fixation and extension are to be employed.
2. The existence of sinuses and abscesses do not contraindicate the immediate application of proper immobilizing apparatus.
3. Forcible correction of deformity is advised only in selected cases.
4. Finally, the success or failure in the treatment of either of these diseases is dependent largely upon the intelligence and willingness on the part of the patient; the care and help of the parents or friends, and prolonged watchfulness at regular intervals on the part of the surgeon.

Union, not division, is now the motto of the profession. Division and the multiplication of medical societies and medical colleges are the characteristics of a medical age which now is past. If medicine is to accomplish its appointed task, there must be harmony among physicians. The perpetuation of divisions means the delay of the full operation of the good tendencies in medical evolution.—*Cleveland Med. Jour.*

SURGICAL CONSERVATISM OF THE OVARIES AND FALLOPIAN TUBES.

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Pathologic lesions of one or both ovaries and Fallopian tubes may be so serious as to call for the most radical surgical measures, even extirpation. There are cases in which extirpation is practiced unnecessarily by operators of limited experience and the conservation of these organs has not received the attention it deserves. It is of this incompetent work, which brings poor results and a high mortality, that I wish to speak. There can be no reasonable excuse offered, nor apology made, for the poor results obtained from the lack of true and intelligent conservatism. Many competent men have explicitly expressed themselves in this regard, but not through channels where their statements would do the most good. Just criticisms have emanated from many of the best men in general practice.

Hydrosalpinx was once recognized as a condition which demanded that the Fallopian tube be removed, together with the ovaries, whether diseased or not; for no macroscopic consideration of the ovaries under such conditions was deemed necessary. Conservatism for retaining, if possible, even one or a part of one of the ovaries, or tubes, or both, resorting to cul-de-sac vaginal drainage of hydrosalpinx, for the purpose of restoring tubal function, is now accepted by the best practitioners.

In suggesting conservative measures to an occasional operator recently, his surprise was marked, yet he advocates extirpation for the reason, I am sure, of his inability to do successfully such conservative pelvic work. In cases of congenital stenosis of the Fallopian tubes, causing sterility, that are diagnosed only after the abdomen has been opened for other reasons, dilatation of the tubes often results in a cure. In healthy Fallopian tubes, associated with a thick tunica albuginea, a free longitudinal and transverse incision, followed by dissection of the same, promises a cure for those ante-operative distressing symptoms of pain and general lassitude along with an exhausted nervous system. With a thickened tunic through which can be plainly seen protruding a few or a number of small flattened or round cysts, the ovary containing them may be retro-displaced and held firmly by bands of adhesions. To free the same by carefully dissecting them away and puncturing them often means success. He who always resorts to hysterectomy for fibroids, whether large or small, should not be regarded as a conservatist in pelvic surgery. Myomectomy in many instances, under such circumstances, may be chosen as the operation of election. Large myomas are successfully removed to save the uterus and the opposite Fallopian tube and ovary. In a recent case I was able to turn out through an abdominal incision, after incising the capsule, five medium-sized fibroids. I found that the sixth one had involved a portion of the anterior uterine wall, which extended from beneath the peritoneum to the endometrium, necessitating the performance of hysterectomy. Had the abdomen been opened earlier in the history of this case, I am convinced that all of these fibroids could have been removed and the uterus with its ovaries saved. As the ovaries were found to be healthy, they were not disturbed.

The influence exerted on the nervous system by the removal of the ovaries and Fallopian tubes during the child-bearing period is now more clearly understood

and more fully appreciated by the neurologist and surgeon. The testicle, which is the analogue of the ovaries, did not suffer so long from being removed, with the hope of relieving the enlarged prostate, as did the ovaries for the relief of pelvic pain.

We would freely criticise, from a scientific standpoint, any operator who failed to do complete work. Completeness must often end in the best conservative efforts within the pelvis, if the operator wishes to command the respect of the general practitioner, and through him the confidence of his patients and their friends. Failure to do this would mean that all true specialties must fall to the ground; consequently a high mortality would result.

It is not an easy question to decide promptly, even after the abdomen has been opened, which is the best operative procedure to undertake for the relief of any condition which may be found. One may have to resect, to drain, or to extirpate one or both ovaries with the appendages. From an operative standpoint, differential diagnostic ability must come from great and constant familiarity with pelvic surgery.

Clinical Reports.

SOLITARY ABSCESS OF THE LEFT LOBE OF THE LIVER SIMULATING ABSCESS IN THE ABDOMINAL WALL.

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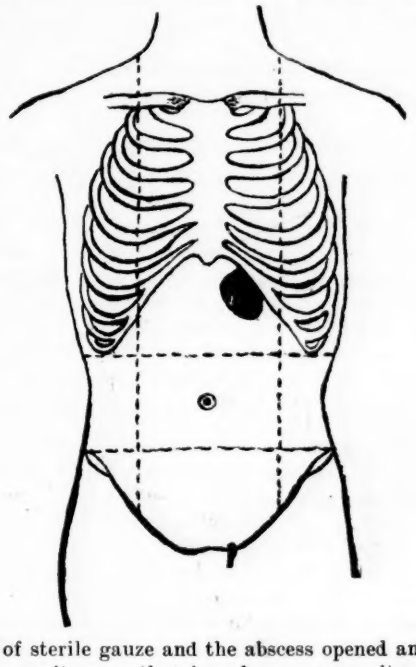
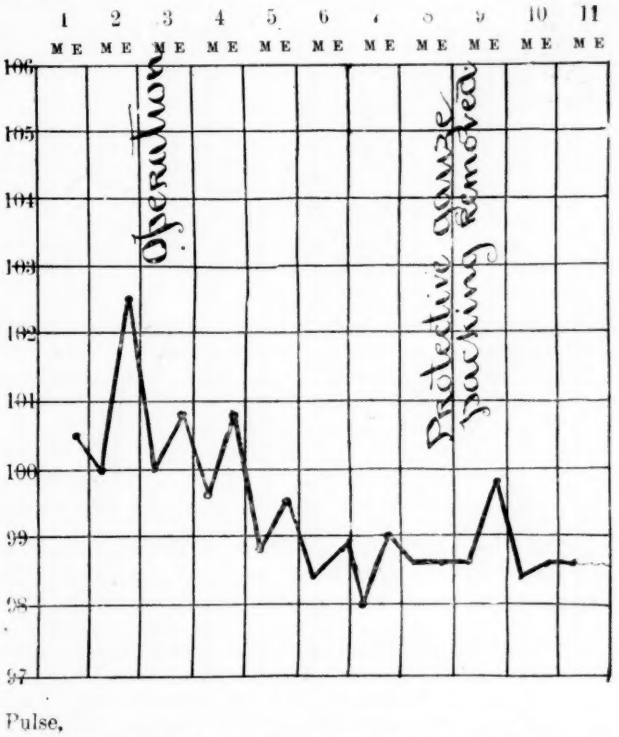
Thomas J., 44 years of age, had rheumatism ten years ago, from which he made a perfect recovery. He remained in perfect health and continued at active labor until the morning of April 24, 1901, when he complained of nausea and epigastric pain. He took salts and obtained a copious action of the bowels, which, however, did not afford relief. The next day there was a slight chill, some fever, pain and soreness in the epigastrium, anorexia and restlessness. On April 29 the symptoms were more pronounced. There were no subsequent chills, but the temperature had risen to 102.5 and the pulse to 100. Abdominal respiratory movements were free and equal on both sides. In the left epigastrium there was a tumor or bulging of the abdominal wall, circular in outline, hard, circumscribed and exquisitely tender to touch and percussion. The tenderness was very superficial, while deep pressure from below upward beneath the tumor was not so painful. I was unable to determine that the tumor dulness was continuous with liver dulness, and the mass appeared to remain stationary on deep inspiration. There was no fluctuation. The tumor seemed to be a part of the abdominal wall, very superficial and immobile. So far as could be determined the liver was normal in size, or at least that portion of the organ lying to the right of the median line. There was no jaundice, diarrhea or sweats.

In the attempt to reach a diagnosis two conditions were discussed. My consultants thought the case one of abscess of the left lobe of the liver, while I took the ground that it was abscess of the abdominal wall, basing my opinion on the following grounds: the absence of any of the ordinary causes of liver abscess, such as the amebic, traumatic, pyemic, cholelithic or cholangitic, and the negative history of rectal trouble, bone disease and diarrhea, together with the lack of proof that the tumor dulness was continuous with that of the liver, the absence of positive proof that the mass moved on deep inspiration, and the superficial appearance and character of the tumor. These arguments led my consultants to accept the diagnosis of abscess of the abdominal wall.

I operated on this patient at the City Hospital, May 2, 1901. A preliminary aspiration brought away pus. A vertical incision one and a half inches long was made directly over the center of the tumor and the peritoneal cavity opened without finding pus anywhere in the abdominal wall. The left lobe of the liver presented in the wound, showing on its upper surface a marbled, white area the size of a nickel coin. There was a total absence of adhesions, and it was apparent that rupture into the general peritoneal cavity was imminent. The peritoneal cavity was carefully protected from infection by a cir-



cular wall of sterile gauze and the abscess opened and drained. The abscess cavity was the size of an orange; its walls soft, pultaceous and shreddy except posteriorly where there was elasticity and rigidity. The pus was almost pure white, creamy and odorless. The cavity was wiped dry and packed with gauze to allow of removal and renewal of the protective wall of



Pulse,

gauze. The packing was then removed and two ample drainage tubes of rubber introduced and carried to the bottom of the cavity. The protective gauze was allowed to remain in place until the seventh day following the operation, when it was withdrawn, together with one of the drainage tubes. The remaining tube was gradually protruded and shortened until it

also was unnecessary. The patient was discharged May 24. He was seen by me Oct. 1, 1901, and gave a history of health and activity.

The etiology of this case is somewhat obscure. From the condition of the posterior wall of the abscess cavity one would incline to the opinion that there may have existed a latent ulcer of the stomach. The temperature record and the size and position of the tumor may be seen in the accompanying diagrams. Similar cases have been reported.

AMPUTATION OF THE PENIS, FOLLOWED BY MULTIPLE PREGNANCY IN THE WIFE.

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Three years ago, J. K., a Finlander, aged 35, was admitted to the Wyoming General Hospital for disease of the penis. I was obliged to amputate the organ, leaving a stump after recovery of about one inch in length. Approximately one year after his discharge from the hospital, his wife, a small, healthy Finlander, of some 30 years, gave birth to a healthy male child. Being somewhat suspicious that the child might be illegitimate, I questioned the wife very closely, and was doubly assured that such was not the case, but a legitimate product of her husband.

About one year later, she had a miscarriage, which was followed by metritis, which I treated with every indication of permanent relief.

On April 1, 1902, I was called to see her and found that she was suffering from a threatened miscarriage. On April 6, I delivered her of a five months' fetus. As her surroundings were bad, I had her taken to the Wyoming General Hospital, where she was delivered of two more five months' male fetuses during that night, and on the next morning, April 7, she gave birth to a fourth. Recovery was rapid and unattended by anything remarkable, and the patient was discharged April 13 in good condition.

It would appear from this case that neither the length of the penis nor its normal condition have much to do with impregnation, so long as the semen of the male and the genital organs of the female are in a healthy condition.

VICARIOUS MENSTRUATION FROM THE RETINA.

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GRAND RAPIDS, MICH.

I desire to report a case of vicarious menstruation that occurred in my private practice six years ago.

Miss R., aged 17; occupation, house work. Both parents are living and are healthy, hard-working people. There is no history of specific trouble or any other hereditary disease. She has never been sick, is strong, robust and well developed. Her menses appeared when she was 14. They were somewhat irregular at first, but had been fairly regular for the last year and a half. They were usually accompanied by headache, some backache and a feeling of indisposition. These symptoms were never sufficiently severe to confine her to bed. During the first day of her October menstrual period, while stooping forward to fasten her shoe, she suddenly felt dizzy and nearly fainted away. Everything she looked at seemed distorted and her vision became dimmer and dimmer. Apparently the left eye was first affected, followed in a few minutes by a similar condition in the right eye. That afternoon she consulted me and I found the appearance of the fundus to be that of hemorrhagic retinitis with numerous blood spots scattered over the field. The optic disc was slightly inflamed and its borders rather indistinct. There were a few clots in the vitreous. The external appearance of the eye was that of an ordinary conjunctivitis. Vision in the right eye was 5/200 and in the left eye 10/200. A tight cold compress was immediately applied and instructions given for a warm sitz bath three times a day. The artificial leech was applied to the temples and about two ounces of blood removed from each side. Potassium bromid and potassium permanganate were given internally and free catharsis established. The menstrual period passed without further trouble. The conjunctival congestion disappeared, the vitreous cleared, and the larger hemorrhagic spots in the retina changed into atrophic ones; the others disappeared without leaving a trace. But before this transformation had been completed the time for the next menstrual period had arrived and with it a repetition of the same phenomenon. The same treatment was instituted as before only to be followed by another and a last hemorrhage in December.

New Instrument.

A NEW ADENOID CURETTE FORCEPS.

WILLIAM A. MARTIN, M.D.
SAN FRANCISCO, CAL.

The instrument here described is one on which I have been working at intervals for the past two years, and which has been remodeled a number of times. The present instrument is light and graceful and works almost perfectly. I can not say that it will displace all other instruments used for the same purpose, but it will do better work than any other single instrument. I assert that in the majority of instances it will remove the whole growth in one piece, that its use will be followed to a minimum hemorrhage and that no injury can be done to the septum, turbinates or pharyngeal walls when used

with ordinary skill. There is little pain following its use compared to that which follows the repeated thrusts necessary in the use of the Gottstein curette and there will be no fragments left hanging to slough away and cause secondary hemorrhage. Furthermore, one has the satisfaction of exhibiting the specimen to the parents, who are not always satisfied with the explanation that the growth has been swallowed. I have had the instrument made in two sizes as some of my colleagues suggested that the smaller would not do the work in all cases. Thus far, however, I have not encountered a case where I could not do the work satisfactorily with the smaller one.

135 Geary Street.

The Sample Nuisance.—One of the minor afflictions of modern life is that curious form of commercial enterprise which manifests itself in the wholesale distribution among householders of samples of products, medicinal, dietetic, disinfectant, and what not. Doctors are naturally marked down by dealers in such wares as their natural prey. Sometimes the samples are sent by post, sometimes they are left, like superfluous babies, on the doorstep. The thing is a distinct nuisance, and might easily become a danger. We are glad to see, therefore, that America, from which this mode of advertisement comes, is taking the initiative in attempting to check it. —*British Med. Jour.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, MAY 31, 1902.

THE HOUSE OF DELEGATES.

On the tenth of next month there will gather at Saratoga Springs, N. Y., a body of men that will be unique from the fact that it will be the first time a national body of medical men ever met that was created in a strictly representative manner. There have been larger gatherings of physicians from the various states, but they were largely self-appointed, and some states had a much larger proportionate representation than others. The House of Delegates of the American Medical Association, however, will be composed of men elected to represent a definite clientele, and a definite territory.

For years those who have been most anxious for success in medical organization, and have desired that the American Medical Association should be more representative in character and of greater influence, have insisted that its legislative branch should be a body in which should be federated the state societies. The House of Delegates will be just such a body. It will be truly representative of the whole country; it will be a body in which will be federated the state and territorial societies. It will be a large committee created by the state societies in proportion to their membership. It will be the mouth-piece of all the state and territorial societies, the exponent of the profession of the whole country.

As such, the responsibilities of its members will be very great, and, while to belong to it will be an honor, the duties will probably be found to be onerous. Especially will this be true as it applies to those who desire to attend the sections and take part in the scientific work, for this they will not be able to do. There are some extremely important questions to be considered, and to consider them will require time. Under the old order, all subjects which were likely to develop an interminable debate were laid on the table by the general meeting; the House of Delegates will discuss these questions deliberately. Vexed questions, such as that pertaining to the Code of Ethics, etc., which were liable to develop acrimonious discussion, were not allowed to come before the large meeting which constituted the old legislative body, if it were possible to prevent; the new legislative body will be able to consider such questions calmly and dispassionately. There are some important problems to be solved in the general plan of reorganization now going on, and these will require much thoughtful consideration. The questions of reciprocity, of a voluntary national examining board, of the regulation of medical colleges and medical education—these and other important problems will come before the new body representing the medical profession of this great country.

We repeat, to be a member of the House of Delegates of the American Medical Association will be an honor; at the same time the position is a most responsible one, the duties of which should not be lightly considered. These duties will not only be arduous but time-consuming and will require much self-sacrifice on the part of those who assume them.

We print elsewhere the names of those thus far selected and reported who will constitute this new House of Delegates. A glance at these names will reveal the fact that this body will be representative in another way than was meant above; it will be representative of the best there is in American medicine. Each state seems to have selected its representative or representatives from among its best members; and the sections also. Those who read these names and know the men will have no fear that the first House of Delegates of the American Medical Association will in any way disappoint those who expect much from that body's deliberations.

NURSING AND THE PHYSICIAN.

An American humorist said not long ago: "If the Christyan Scientists had some science an' the doctors more Christyanity, it wudden't make any difference what ye called the disease—if ye only had a good nurse." The passage, of course, has been much quoted. It is only with the last phrase that we have any fault to find, and that solely because, while containing a modicum of truth, it is liable to render still more popular than before the wrong interpretation of an expression often, unfortunately it seems to us, used without exact definition of its meaning, even by physicians themselves. In recent years we frequently hear the expression, "What is needed is good nursing." With regard to the specific fevers that run a definite course and are self-limited, the expression is very appropriate. The public and the medical profession, however, understand the maxim in entirely different senses. The physician means that as yet we know no specific treatment for the disease and that what is necessary therefore is careful and unremitting symptomatic treatment. The public mistranslates the expression somewhat inconsequentially into the idea that the doctor feels himself powerless in the presence of the disease; he can not cure it, he can not abort it, he can not even materially shorten its course and so he frankly and disinterestedly, though a little unwillingly, concedes that the only hope is in the nurse's careful ministrations. Nothing could well be further from the truth than this entirely erroneous impression.

There is an interesting palimpsest of meanings in the word "nurse." To nurse meant originally to nourish with breast milk. How much wider the signification of the word has become may be best judged from the fact that now the verb may be used with a connotation of the

other gender also and has come to have as an appropriate definition "to husband the strength."

By good nursing is meant every possible care of the patient. Symptoms that reduce the patient's vitality must be met, the strength must be conserved, every source of annoyance that may sap nerve force must be, as far as possible, removed. The bowels must be kept in order, the appetite must be aroused if the fever continues and threatens to exhaust the patient and, finally, sufficient nourishment must be ingested in some way, if necessary, extra-orally, to keep the balance of vital energy from sinking below a dangerous level. In a few words, 'nursing," or symptomatic treatment, must do all that the older physicians insisted on as curative and must do it in that broader and more rational way that uses every force of nature to the best advantage in the combat with disease.

Needless to say, the problems involved in this active care for patients, include thorough familiarity with every resource known to modern medical science. Good nursing implies the use not only of all the natural therapeutic measures, but also of the drugs suited to the case, and even of the less serious manipulations usually classed as surgical. It is in this wide sense that the physician talks of the benefits to be derived from good nursing. The public must not be allowed to drift into error in the matter. Undoubtedly, the institution of the trained nurse and the improved nursing conditions in our hospitals have greatly lessened the mortality from the specific infectious diseases, and especially the prolonged fevers, but this is so only because of the constant sedulous supervision of trained medical skill. Instead of lessening the need for the physician's attendance the more general employment of nurses has emphasized the advisability of noting even slight changes in patients' conditions and of meeting symptomatic indications before they become actual complications.

The ounce of prevention that is worth a pound of cure now has a chance to be applied as never before. The constant watchfulness that is the essence of good nursing keeps the physician so well informed of even passing conditions that no important indication for his services is missed, or even put off for a short time to the patient's detriment. This, and not the falsely assumed interpretation of the word that would ignore the most hopeful, helpful elements in present-day medical practice is the true modern meaning of the word nursing.

GELATIN AS A FOOD AND THERAPEUTIC AGENT.

Gelatin is an albuminoid substance obtained by boiling skin, connective tissue and bones of animals in water. When taken alone it has but little value as a food. Animals fed upon it exclusively rapidly lose strength and weight and finally die from starvation. If it is added to other foods it possesses the property of limiting the consumption of non-nitrogenous materials and saving the waste of albuminous tissues. It takes no part in the repair and growth of tissues and must be considered solely as an "albumin sparer." Consequently gelatin must always be combined with other proper foods. It does not replace albumin, and the destruction of albumin takes place to some extent even when gelatin is taken in a large amount. Gelatin is easily dissolved and absorbed from the stomach, and is usually taken in the form of jellies flavored with coffee, fruit juices, sherry wine, etc., and it may be rendered more palatable by the addition of meat extract. Brat[1] has recently reported, from Leyden's clinic, the preparation of a gelatose, obtained by the action of acid upon gelatin at a high temperature. This substance is soluble in cold water, and can be administered in solutions with a flavoring of fruit syrups, etc., in much larger quantities than gelatin will be tolerated.

The special indications for the employment of gelatin as a food are not entirely clear. As to its use in diabetes mellitus there is some difference of opinion. Senator advocates its use in this disease as it has been shown to be a weak glycogen builder. In intestinal putrefaction it may be employed with advantage since no indol or phenol is formed from it as a result of bacterial action. It is generally recognized as a useful addition to other foods in the diet of fever cases. G. Klemperer points out that gelatin is contra-indicated in cases of oxaluria and oxalic renal calculi, as it gives rise to oxalic acid and causes its increase in the urine.

During the past five years, clinical evidence has been accumulating which indicates that gelatin, when injected hypodermically in solution, has a marked influence in increasing the coagulability of the blood. It has proven especially valuable in cases of hemophilia and aneurysm. Successful hemostatic results have been reported to have followed the administration of gelatin by the mouth, but the cases have been few and not perfectly convincing. The results of some investigations by H. C. Wood, Jr.,[2] on the effects of the digestion of gelatin on its styptic properties are of much value in placing the administration of gelatin by mouth for hemostatic purposes upon an intelligent basis. He found that pepsin digestion of gelatin does not destroy its coagulating effect on the blood. The product of such digestion is dialyzable and therefore capable of absorption, and the administration of gelatin by the mouth in the treatment of hemorrhage is therefore a rational procedure. These facts are of special importance in view of recent observations of cases of tetanus following the hypodermic injection of gelatin and of the demonstration of tetanus bacilli in many samples of gelatin.[3] If gelatin is to be administered to man by hypodermic injection it is advisable to first test it upon experimental animals to determine the absence of tetanus bacilli and their toxic products. It would be desirable for manufacturers to furnish the profession with gelatin, which had been sterilized and properly tested, in some convenient form so as to be ready

1. Deutsche Med. Woch., Jan. 9, 1902, 21.
2. American Medicine, May 3, 1902, 729.
3. JOURNAL A. M. A., March 8, 1902, 651, and March 15, 1902 740.

for immediate use. If future results show the introduction of gelatin by the mouth to be as satisfactory as the hypodermic injection, the danger of tetanus can be eliminated by employing the former method.

THE SEED AND THE SOIL.

In a recent number of the *Lancet*, Dr. W. Howship Dickinson reviews certain facts with special reference to the germ theory of disease, in what seems to us a very sensible way. At the present time the discovery of a microbe in a disease conforming to the recognized criteria of pathogenicity, is too commonly accepted as ending discussion as to its treatment—we must keep out the germ of infection and the disease is conquered. Hence, the premature and exaggerated deductions as to the importance of isolation, disinfection, etc.—all measures good in themselves and absolutely essential in many infections, but by no means so much so or so beneficial in certain others where their all-importance is at the present time so much agitated. We must keep in mind that the soil as well as the seed is essential and the human organism does not in all cases and at all times furnish the same pabulum and foothold for the germs. They may sometimes fall on stony ground or the thorns of other more or less serious pathologic conditions may overwhelm them. In every epidemic and with every infection there are those who are immune, often only the insignificant minority are susceptible. Dickinson discusses these facts, using as an apt illustration the well-known microbic disease, relapsing fever, which depends so absolutely for its occurrence upon the non-resistance favoring environment that non-nutrition, etc., can supply; that its accepted synonym is famine fever. The most attention, however, is given by him to tuberculosis, which he considers stands first as a striking example among diseases of the importance of susceptibility as a determining etiologic factor. The microbe, though the undoubted cause of the disease, is of secondary importance; it is not so much the bacillus as the reception offered to it that needs to be seriously considered. This depends upon various factors, first among which Dickinson recognizes heredity as of unassailable importance, then come local inflammatory conditions, such as pneumonia or capillary bronchitis and influenza, irritant inhalations, alcoholism, exhaustion and depression, damp sub-soil, overcrowding, and insufficient ventilation. Without these singly or together the microbe is harmless as a rule. "We can imagine," says Dickinson, "an isolated item of humanity on some mountain summit or isle of the ocean congratulating himself if on nothing else on his exemption from tubercle, but in common social conditions the seed is sown broadcast and the vital question is not where it will be deposited, but where it will grow." There is danger, as he says, that we may have too much thought for the microbe and too little for the man, and in the contest between the two it is more to the purpose to support the man than to attack the microbe. As a rule, the bacilli of the disease are out of our direct reach, but we can make, he thinks, the conditions so unfavorable for their existence in most cases that they will have to succumb. There is abundant evidence that our systems are constantly getting the better of diseases that we consider hopeless, and even cancer has been reported to have undergone, in rare cases, a spontaneous cure. The antitoxins are also used by Dickinson as an apt illustration of the law that the seed is impotent if the soil is unfavorable. They do not destroy the bacilli; the diphtheria bacillus he is assured will grow in its antitoxin, but they somehow or other so modify the blood and tissues as to render them no longer capable of supporting the germs. He would not be understood as ignoring the latter for we can do something by excluding them, and we may even hope to see some of them exterminated. There are two sides, however, to be looked upon in the management of diseases, the attacking organism and the resistance, and both must be considered. We have of late perhaps relied too much upon direct frontal attacks on the enemy in some diseases and tuberculosis may be one of these. It is well that we should be occasionally reminded to reform our strategy. The optimistic notion that by isolation, etc., we can stamp out tuberculosis seems very little warranted when we have in mind its widespread distribution throughout the animal kingdom; but we are learning facts every day that make it seem less formidable. We have already a partial immunity and it may be that with further knowledge of the disease we can make it far more nearly complete.

SERUM DIAGNOSIS APPLIED TO PULMONARY TUBERCULOSIS.

Of the curability of pulmonary tuberculosis there is no longer any reasonable doubt, but the prognosis will in general depend upon the promptness with which the individual case comes under observation and is subjected to treatment. Any means, therefore, that will contribute to the early diagnosis will, by so much, facilitate recovery. Often the disease will have made considerable progress before the appearance of physical signs sufficiently distinctive to explain the obscure symptoms present. The tuberculin test, although valuable, is not entirely free from risk and care must be exercised in the interpretation of its results. The utility of the serum-agglutination-test in the diagnosis of typhoid fever has suggested the application of the same expedient to other diseases, among them tuberculosis, but here there has been a wide divergence of opinion.

Observations have been recorded to the effect that the blood serum of certain animals treated with tuberculin or with attenuated cultures of tubercle bacilli and also the serum of many tuberculous patients, as well as tubercular exudates, is capable of causing agglutination of bouillon-cultures of tubercle bacilli. Results of an opposite character have, however, been reported by other observers. For the purpose of determining which of these views is the correct one, Dr. Francesco di Grazia[1]

1. Berliner klinische Wochenschrift, March 17-24, 1902.

undertook a series of investigations that led to the conclusions, 1, that the blood serum of many animals with certainty free from tuberculosis is capable of causing complete or incomplete agglutination of cultures of tubercle bacilli; 2, that the blood serum of persons suffering from various non-tubercular diseases is equally capable of causing agglutination of cultures of tubercle bacilli in the same dilution as the blood serum of tuberculous patients; 3, that the blood serum of patients suffering from pulmonary tuberculosis is capable of causing agglutination of cultures of various kinds of bacteria, at times in greater degree than cultures of tubercle bacilli, at other times in almost the same degree and at yet other times in lesser degree. Similar results were obtained with emulsions of dead tubercle bacilli. It was found, further, that the reaction between the blood serum of tuberculous patients and cultures of tubercle bacilli or emulsions of the dead bacilli may be positive and intense in advanced cases and in those approaching a fatal termination, and slight in the mild and incipient cases, in the absence of any constant relation between the degree of agglutination and the stage of the disease.

The phenomenon of agglutination thus appears from these later observations to be of little or no significance in its bearing upon either the diagnosis or the prognosis of pulmonary tuberculosis.

IDIOPATHIC OR CONGENITAL, HEREDITARY AND FAMILY HEMATURIA.

Hematuria with no apparent or demonstrable cause has been the subject of considerable discussion, and one explanation for some of the cases was mentioned editorially[1] in a recent issue.

L. G. Guthrie[2] has reported a most interesting series of cases of hematuria occurring in two sisters and eight of their children. Blood was noticed in the urine soon after birth and persisted for years. The amount of blood was variable, sometimes being sufficient to impart a bright red color to the urine and again being recognized only by a microscopic examination. In all the cases there occurred paroxysmal exacerbations of the hematuria accompanied by slight pyrexia, malaise, headache, vomiting and slight pain in the back or limbs. These paroxysms could not usually be ascribed to any certain cause and occurred at night as well as during the day. None of the usual symptoms of nephritis were present. The excretion of urea was normal and the hemorrhage could not be connected with the presence of uric acid or oxalates. The urine was normal in quantity and specific gravity, acid or neutral in reaction, and usually contained from one-twentieth to one-fourth of its bulk of albumin. The sediment contained normal blood corpuscles, tubular blood-casts in greater or less abundance, but never other varieties of tube-casts. No case of the series showed any other evidence of hemophilia. All the local causes of renal hemorrhage were excluded. Some of the children in the families escaped.

1. THE JOURNAL A. M. A., May 17, 1902.
2. Lancet, May 3, 1902, 1243.

Somewhat similar cases have been previously reported but they have lacked the congenital and hereditary character. Attlee has recorded three cases of recurrent hematuria occurring in one family. Durante has observed cases of cyclic hematuria in children in which no cause for the condition could be ascertained, and he concludes such to be instances of simple or idiopathic renal hemorrhage analogous to epistaxis.

The etiology of the hematuria in these cases is obscure. The local causes appear to have been satisfactorily excluded. Durante suggests the idea of a developmental defect in the walls of the renal capillaries. Guthrie thinks the most reasonable explanation to be the existence of some inherent weakness or varicosity of the walls of the renal vessels. The analogy between this condition and hemophilia is very striking. In some cases of hemophilia an abnormal thinness of the vessels has been found, and in some instances the tendency to excessive hemorrhage has been confined to certain parts of the body. It is possible that in these cases of idiopathic hematuria, the abnormal condition of the vessels, corresponding to those found in hemophilia, are located in the kidneys alone. It is difficult to imagine any toxic agent acting in so many members of two families, and not more often showing its effects in a similar manner in other persons.

RATES TO THE SARATOGA MEETING.

As we go to press, we learn that a rate of one fare plus two dollars will be made for the round trip to the Saratoga Springs meeting. The Lake Shore & Michigan Southern Railway, in connection with the New York Central Railway, has been selected by the Committee on Transportation as the official route from Chicago and the Chicago Medical Society will run a special train, leaving Chicago at 11:30 a. m., Sunday, June 8. This will afford an opportunity for those who avail themselves of it to materially reduce their expenses and ought to favor a largely increased attendance. Under Association News will be found full details as to sale of tickets, time of return, etc. This reduction applies to roads east of Chicago and it is presumed will also be extended to those farther west. The Committee of Transportation deserve praise for their continued efforts in the matter. The Lake Shore Road has given valuable assistance and has exerted a leverage upon the eastern roads that has aided greatly in securing their concession. Let us make the Saratoga meeting the largest and best ever held.

HONORARY MEMBERS.

The new Constitution of the American Medical Association provides for the election each year of not to exceed three honorary members who "shall be physicians of foreign countries who have risen to preëminence in the profession of medicine." It also provides that these shall be elected by the House of Delegates on the nomination of a Section. It will be well for the various sections to remember this new provision. It is presumed that each Section that desires to do so will select some noted foreigner working in the particular branch of medicine represented by such Section and recommend

such to the House of Delegates for election to the position. There should be an effort made to elect as honorary members of the American Medical Association only the best men in the old world and it should be an honor for whomever receives the distinction. We would suggest that the various Sections take this matter up at their first meeting so that the recommendations can be made to the House of Delegates not later than Thursday morning.

THE ANNUAL MEETING.

The Saratoga meeting, the first in New York State for more than twenty years, ought to be—and promises to be—well attended. Occurring as it does at a popular summer resort with ample accommodations and many local attractions, it will afford a specially favorable opportunity for physicians to utilize it in their annual outing, of course without neglecting the scientific and professional opportunities of the meeting. The present is a suitable time for members to endeavor to interest their professional colleagues in the Association, which, while it has now over 11,000 members, should include a still much larger proportion of the profession. If each member made himself an active missionary for the increase of the membership the outsiders would soon be the exceptions and not the rule, and the Association would be the grandest and most powerful medical organization the world has seen. With all its growth up to the present its future is yet all before it and the possibilities are only limited by the good will and activity of its membership. The attention of members is called to the advertising pages 47 and 48 in this issue, where blank forms for application, etc., are given. An earnest effort at the present time will count much for good.

A VOLUNTARY NATIONAL EXAMINING BOARD.

One of the arguments against the practicability of the proposed national examining board is that the states will not recognize its certificate. If the medical profession wants such a board, and wants its certificates recognized by every state, then we can have such a board and its certificates will be recognized by every state. It is the medical profession that has put the medical laws on the statute books of the various states; there is not a medical law but that became such through the exertions of the medical men. If the profession wants these laws modified, it can have them modified. If a national examining board shall be created, and the influential members of the medical profession in each state will ask to have its certificate recognized, its certificates will be recognized. There is not a particle of doubt about it. The first thing needed, evidently, is to educate the members of the profession to appreciate the importance of such a national board; this done, the rest is easy. If the certificate of such a board represented a standard of education higher than that of any state board of examiners, there would be no difficulty in having such recognized.

EMPLOYMENT AS A THERAPEUTIC AGENCY IN PUBLIC INSTITUTIONS.

If there is any fact known as a certainty to alienists and penologists it is that rational employment of those whose condition will permit is conducive to mental health or improvement. Without it our prisons would become culture-beds of dementia and one of the most valuable therapeutic resources of our asylums would be wanting. Notwithstanding this fact it is sometimes a question how this means for good can be made available and the difficulty is increasing. In times past some of our state penitentiaries have been made self-supporting by the labor of the prisoners and the discipline and general welfare have been greatly facilitated and improved. Of late years, at least in many states, the demands of the labor leaders have seriously embarrassed the prison managements by inducing the enactment of laws against prison labor; indeed, it is only by makeshifts and sometimes possibly by evasions of such laws that the authorities manage to keep up the discipline and health of their establishments. So far the asylums have mostly escaped the notice of the labor unions, but recently we have seen a complaint that work that might be done by outsiders was being performed by patients and it is quite within the possibilities that any such work in the future may also be prescribed. While it would seem unreasonable enough to forbid the medical prescription of employment at some useful labor, there are precedents that threaten even this. In the case of penitentiary inmates the question is a living one at the present time; no one questions the need of rational employment for their health, but provisions for this purpose and compliance with the law are hardly reconcilable under the legislation of some states. The profitable employment of a considerable portion of the chronic insane is practicable and desirable and its comparative neglect in our asylums thus far has been greatly to their injury. It would be unfortunate that action based on the realization of this fact should be embarrassed by class legislation. The matter is one that ought to interest the medical profession which should use its influence judiciously for the welfare of the unfortunate and the public welfare. It is not good political economy to increase insanity or to make it incurable.

PROPHYLAXIS IN INFECTIOUS DISEASES.

In the diseases usually spoken of as contagious it has been customary to insist upon rigid prophylactic measures to prevent the dissemination of the infectious agents. Some other diseases, which at times are transmitted directly from person to person, have received little attention in this direction. Among the diseases referred to may be included pneumonia, tonsillitis and influenza. The clinical observations of a considerable number of physicians furnish almost incontrovertible evidence that lobar pneumonia is something due to the infection of a healthy person by pneumonic sputum. This is especially liable to occur in the person of the nurse or attendant upon the sick, the necessary susceptibility being produced by loss of sleep and general exhaustion. In follicular tonsillitis the evidence of contagion is as convincing as in the so-called contagious diseases. There is no question that influenza is contagious. Because the danger of contagion in lobar pneumonia is not usually great and because follicular tonsillitis does not usually endanger life, the necessity of adopting measures to prevent the direct contagion of these diseases has not usually appealed strongly to the physician or to

the laity. In all of these diseases the danger of infection could be very much reduced if care were taken that the infected material thrown into the air in coughing, etc., were not allowed to enter the mouth and throat of the attendants, and if the sputum were carefully disinfected, and the hands sterilized after being contaminated by the secretions from the local disease, especially before eating. It is scarcely desirable to adopt such thorough isolation, etc., as are required in the more eminently contagious diseases, but by relatively simple measures many cases might be prevented.

CHURCH HYGIENE.

Our contemporary, the London *Lancet,* calls attention to the aid in combating infectious diseases which may be afforded by the clergy through their influence over the laity in such matters as vaccination, ventilation, etc. This general influence over individuals is not the only way in which the clergy may aid in obtaining better hygienic conditions, for they may also do much to further the introduction of proper conditions of hygiene into church buildings and services. It is certain that infectious germs are carried into churches by attendants at services and if the buildings are damp and little sunshine and fresh air gain entrance, as is too often the case, the conditions are very favorable for these germs to remain alive and capable of producing infection when opportunity occurs. Besides microscopic agents of this kind, there are also carried into churches larger animal parasites, which have been often observed in churches since the days of Burns. Efforts should be made to rid church buildings of both the infectious bacteria and vermin by thorough airing after services and by the frequent employment of antiseptic washes and other measures used in private and other public houses. Simple furnishings in churches, such materials being used as can be properly cleaned, would much facilitate this. There has been a commendable effort among some of the church authorities in Italy to introduce the sanitary measures indicated, and they have not overlooked the holy water which has often been found badly contaminated. The water is to be frequently renewed after careful cleansing and disinfection of the receptacle. The common communion cup has met with much disapproval from a sanitary standpoint, and the subject has been referred to in THE JOURNAL on several occasions. It is gratifying that individual cups are gradually being introduced into the protestant churches throughout the country.

THE BACTERIOLOGY OF THE NOSE IN HEALTH AND DISEASE.

Systematic bacteriologic examinations of the mucous membrane and contents of the nose would seem to offer important results. The nose is frequently the seat of inflammatory processes of an acute character that often appear to extend to neighboring cavities and membranes and that even may seem to be the starting-point of important internal infections. The comparisons between the bacteria of the healthy nose and those of acute rhinitis might throw some light upon the etiology of the latter, all forms of which are probably not of the same importance. It is consequently not without value to note the results recently published by Neumann[1] of careful examination of 206 persons. In 111 the nasal mucosa was normal, in 95 the seat of some recognizable lesion. Nineteen different species of bacteria were found, the most common being pseudo-diptheria bacilli (in 9 per cent. of the cases) and white micrococci (86-90 per cent.). There were also found yellow micrococci, pneumococci, streptococci, diphtheria bacilli, Friedländer's bacillus, etc. The pseudo-diphtheria bacillus appears to be a constant inhabitant of the nose; it was not found to be virulent in any of the cases of this series which were freely examined on that point by means of inoculations of guinea-pigs, and it must be regarded merely as a harmless saprophyte. In acute coryza the pneumococcus, streptococcus, Friedländer's pneumobacillus, and the diphtheria bacillus are more conspicuous and more frequent than in the healthy nose, and Neumann regards it as definitely established that virulent diphtheria bacilli and the pneumococcus may produce the clinical symptoms of coryza. His investigations do not lend support to the idea that coryza is caused by a specific germ and favor the conception that ordinarily it is a more or less superficial catarrhal affection. It is important to know that virulent diphtheria bacilli may cause acute coryza as well as the so-called rhinitis fibrinosa.

THE DIAGNOSTIC VALUE OF AGGLUTINATION IN MIXED INFECTIONS.

Mixed infections are frequent in typhoid fever, and as this disease is the one disease above others that calls for the agglutination reaction as a diagnostic measure, it becomes of value to know what influence, if any, mixed infection may have on this reaction. Castellani[2] studied this question experimentally. In one series of experiments he injected rabbits with two different, agglutinable bacteria at the same time, such as the typhoid bacillus and the colon bacillus, the typhoid bacillus and the bacillus of dysentery, etc. He found that the blood serum acquires agglutinating properties for all the bacteria injected, the time of appearance, intensity and duration of the agglutination of each bacillus being identic with the conditions observed when only one bacillus is injected. He then established a single infection to which there was added after a time a second infection and found that here also the agglutinative powers develop in the same manner for both bacilli as is observed in the case of a single infection; occasionally there was some delay in the appearance of the second crop of agglutinins which very rarely were of but insignificant strength. Castellani then reports a few cases of mixed infection in the course of typhoid fever in which there seemed to be no disturbance in the agglutination by the serum of typhoid bacillus at the same time as special agglutinins arose for organisms of the added infection. In the case of some organisms, e. g., the colon bacillus, the blood serum may be so strongly agglutinating normally or as a consequence of the typhoid infection, that no conclusions can be drawn as the presence or absence of a mixed infection in a given case. The following procedure is suggested in doubtful cases of this kind in which it is assumed the serum agglutinates typhoid bacillus and colon bacillus: add to the serum typhoid

1. Zeitschr. f. Hyg. u. Infektionskr., 1902, xl, 33-53.
2. Ibid., 1-19.

bacilli in large quantities and allow the mixture to stand for some hours; if the serum now loses its agglutinative powers on the typhoid bacillus but not on the colon bacillus it probably concerns a true mixed infection. Naturally the same method is applicable to the determination of a given bacterium. It would seem that in the study just beginning, of the so-called paratyphoid infections, the question of mixed and secondary infections might be a troublesome one to clear up in some cases. Perhaps the application of the principle recommended by Castellani for the determination of the real nature of the agglutinins present might prove serviceable.

SANITARY CONDITIONS OF STREET CARS.

A short time ago we called attention[1] to some of the defects in the railroad car from a hygienic standpoint. G. A. Soper[2] has recently discussed the sanitary condition of street cars in New York, and what he says could be equally well applied to many larger cities in this country. The injury to health from overcrowded, poorly-ventilated quarters is well established. In such crowded apartments the effect of the foul atmosphere, which has not inaptly been called "sewer-air," is to lower the general resistance of the individual, making him more susceptible to the infectious agents which are most readily disseminated when persons come in close contact. Insufficient heat is also pointed out by Soper as injurious, both in itself and by leading to a shutting out of the outside air in order to keep warm. The matting in street cars contains an enormous number of bacteria. Sputum which is deposited in cars, after becoming dry and being pulverized by the feet of passengers, is readily disseminated through the air and then inhaled.

All of these objectionable features of street cars could be remedied by furnishing a sufficient number of properly-ventilated and heated cars to accommodate the public, and by the employment of suitable measures for insuring cleanliness and disinfection. Street railroads have adopted fenders, reliable brakes and other means of preventing direct destruction of life whenever the cost of such improvements have not exceeded the cost of the lives destroyed as measured in money value, or when they have been compelled to do so by legal enactments. Unfortunately, the injury to the health of passengers from crowded, improperly-ventilated and dirty cars can not be readily demonstrated in the individual case, and so direct claims for damages by the passengers do not act as a stimulus to the car companies to furnish better and more sanitary accommodations.

THE LOCALIZATION OF TUBERCULOUS INFECTION.

A tendency has grown up to look upon every infectious process as a constitutional disorder with local manifestations, whereas a little reflection will show that, as a rule, it is the opposite relation that prevails. Pathogenic agents that gain entrance into the body generally find lodgment at some point anatomically related to the channel of entry. Here, they are most likely to set up their peculiar morbid processes, from which, however, extension may take place by continuity or contiguity of tissue, or through the blood or the lymph vessels. In any event the individual lesions are essentially local, although they may not be circumscribed, but rather diffuse or disseminated in distribution. Whether the one or the other, the poisonous products resulting from the reaction between the invading micro-organisms and the attacked tissues are distributed through the circulation and reach all parts of the body, thus giving rise to the constitutional phenomena. The micro-organism acts as a local irritant, while its toxin acts as do other chemical substances. It is probable, further, that both bacterium and toxin have special affinities for certain tissues by reason of which more or less characteristic—if not specific—lesions and symptoms result. The importance of the foregoing considerations resides in their bearing upon the possibility of cure and receives illustration in a recent communication by Dr. O. V. Petersen[1] upon the tuberculous diseases of the skin and their relation to the internal organs. He dwells especially upon the fact that tuberculosis, whether situated in the lungs or in other organs, on the skin, in the bones, in joints, is usually a local disorder, although in a small proportion of cases the process is generalized. Accordingly, he believes that in addition to increasing the resistance of the body to the carriers of infection the treatment should be principally local, as, for instance, the use of phototherapy in cases of lupus.

1. THE JOURNAL A. M. A., Feb. 8, 1902.
2. Medical News, April 19, 1902, 737.

1. Berliner Klinische Wochenschrift, April 21, 1902, p. 352.

Medical News.

ALABAMA.

Evacuation of Prison.—On account of the recent epidemic of pneumonia in the prison at Coalburg camp, and the exceedingly high mortality, the governor has ordered the 200 state convicts confined there to be removed to another locality.

Cornerstone Laid.—The cornerstone of St. Margaret's Hospital, Montgomery, was laid with appropriate ceremonies, May 20. The building is to be three stories high, and 140 by 90 feet. The temporary hospital will be ready to receive patients about June 1.

Faculty Changes.—At the annual meeting of the faculty of the Medical College of Alabama, Mobile, Dr. Tucker H. Frazer was elected to the chair of physiology and hygiene, vice Dr. W. B. Pape, deceased, and Dr. William R. Jackson was elected professor of surgery, vice Dr. W. T. Scales, deceased.

Sanitarium Incorporated.—At Birmingham a charter has been obtained for the Highland Sanitarium, the incorporators being Drs. Edward P. Riggs, Wyatt Heflin, Cunningham Wilson and William M. Jordan. The building to be erected will be fireproof and will have accommodation for 40 patients.

ILLINOIS.

Million Will Set Aside.—At Springfield the will of Dr. John L. Million, a wealthy physician, was set aside, May 19, on the ground that he was of unsound mind.

Hospital Cornerstone Laid.—On May 22, the cornerstone of the new St. Anthony's Hospital at Rockford was laid with appropriate ceremony by Bishop Peter Muldoon. The hospital building will cost $50,000 and the institution will be under the charge of the Sisters of St. Francis.

Illinois Doctor Arrested in Missouri.—Dr. John M. Davis, Hamilton, who has been making professional visits to different towns throughout Macon County, Mo., during the past fifteen years, was arrested recently at Macon on information filed by the prosecuting attorney of the county, charging him with practicing medicine without a certificate from the Missouri State Board of Health.

Chicago.

Polish Hospital Dedicated.—On May 25, with elaborate ceremonies, the hospital of St. Mary of Nazareth was dedi-

cated by Bishop Muldoon of this diocese. The building is a fire-proof stone and brick structure 196 by 87 feet, and has cost more than $250,000.

Convalescent Hospital Needed.—One of the most urgent needs of this city is a convalescent home or hospital. From Cook County Hospital alone 60 patients are discharged daily, and many of these are not sufficiently strong to be able to return to work. An institution, preferably located in the country, would be of incalculable value to these patients.

The Hot Spell.—The first death of the season from sunstroke occurred during the week, and the unseasonably hot weather, although brief in duration, had a decidedly unfavorable effect on the public health, shown chiefly in an increased mortality among infants. The effect was also marked upon the quality of the milk supply, the number of samples below grade, 9.2 per cent.. being double that of the week before. Three samples were found containing formalin, added to prevent souring.

Increase of Suicide.—Among deaths from all the different forms of violence, only in those by suicide, is there any increase during the last decade. During the eleven years, 1880-1890 inclusive, there were 1272 suicides out of the total of 7898 violent deaths—a proportion of 16 per cent.; during the eleven years, 1891-1901, there were 3681 suicides out of a total of 17,023 violent deaths—a proportion of 21 per cent. and an increase of 30 per cent. in the proportion of suicides.

The Dispensary Question.—Resolutions denouncing the faculty of the College of Physicians and Surgeons for establishing free dispensaries throughout the city were adopted after a heated debate at a meeting of the Alumni Association of the college, May 19. Representatives of the faculty were present and answered the charges made by the committee on resolutions. The resolutions declared that the free dispensaries encouraged pauperism and were directly in opposition to the graduates of the institution, who had settled in different parts of the city only to find that their alma mater had surrounded them with free establishments. In answer to the charges the secretary of the faculty said that the dispensaries were established for the instruction of the students of the college as well as for the good that could be done for the poorer class.

Increased Longevity.—The two sets of data which supplement and corroborate each other show that the average duration of life in Chicago has increased from less than fourteen years to more than thirty-one years in the last third of a century—considerably more than doubled in a single generation. They show that, exclusive of deaths by suicide, there is a decrease of 6.3 per cent. in the proportion of deaths from all other violence and of 6.7 per cent. in those from homicide or manslaughter, comparing the period between 1880-1890 with that between 1891-1901. Included in "all other violence" are the deaths from railway and street-car accidents, and these show a decrease of more than 5 per cent. in the whole of the latter period, while in the last six years, 1895-1901, during which track elevation of railways, fenders on street cars, and other measures of safeguarding life and limb have been developed, the decrease is from 21.7 per cent. of all violent deaths in the earlier period to 18.8 in the latter six-year period—a decrease of deaths from street-car and railway accidents of 12.6 per cent., or more than one-eighth.

Influenza and Suicide.—The relation, as cause and effect, of influenza and suicide is clearly demonstrated by a further study of the figures. The fourth great pandemic of influenza in this country began in December, 1889, since which time Chicago has never been entirely free from the infection. Influenza is a subtle and insidious malady, not usually killing outright, but fatally complicating other diseases and profoundly affecting through the toxin or poison of its baciilus the brain and nervous system, and so causing all forms of mental and nervous disturbances, from simple melancholia to suicidal mania. This disturbance may take years to develop, and it was not until 1895 that the full effects of the 100,000 cases estimated in 1890 began to be manifest. During the seven years, 1888-1894, there were 9565 violent deaths, 1677, or 17.4 per cent., being suicides; during the succeeding seven years, 1895-1901, there were 10,557 violent deaths, 2544, or 24 per cent., being suicidal, an increase of 38 per cent. in the proportion of suicides. Since January 1 of this year there have been 166 suicides, an increase of 10 per cent. over the number during the corresponding period of last year.

INDIANA.

Typhoid Under Control.—The statistics of the State Board of Health indicate that the state is getting typhoid fever under control. There were only 1198 deaths in 1901 from the disease, as against 1320 in 1900, and about 15,000 cases, as against about 17,500 in the previous year.

St. Edward's Hospital Staff.—The following-named are announced as the staff of St. Edward's hospital, New Albany: President, Dr. John Hazlewood; surgical staff, Drs. Charles P. Cook, Robert W. Harris and Elihu P. Easley; medical staff, Drs. John F. Weathers, Charles W. McIntyre, William C. Windstandley and Frank H. Wilcox; gynecologists, Drs. Anna I. McKamy and George H. Cannon; medical consultants, Drs. Charles Bowman, Thomas C. Neat and Seymour C. Wilcox; surgical consultants, Drs. John H. Lemon and Edwin L. Sigmond; anesthetist, Dr. William L. Starr.

Mortality and Morbidity in Indiana in April.—The State Board of Health *Bulletin* reports 2716 deaths in April, an annual rate of 13.1 per 1000. In the corresponding month last year there were 2839 deaths, or an annual rate of 13.7 per 1000. In the preceding month there were 3045 deaths, an annual rate of 14.2 per 1000. By important ages the deaths were: Under 1 year, 411; 1 to 5, 170; 5 to 10, 61; 10 to 15, 76; 65 and over, 760. By important causes—pulmonary tuberculosis, 381; other forms of tuberculosis, 48; typhoid fever, 41; diphtheria, 24; scarlet fever, 12; measles, 12; whooping cough, 20; pneumonia, 352; diarrheal diseases, 22; cerebrospinal meningitis, 30; influenza, 37; puerperal septicemia, 14; cancer, 82; violence, 18. All cities, representing a population of 857,840, reported 1166 deaths, an annual rate of 16.5 per 1000. The county, representing a population of 1,658,622, reported 1550 deaths, an annual rate of 11.4 per 1000.

MARYLAND.

Dr. Samuel T. Haffner, Frederick, has been appointed health officer of Frederick County.

New Hospital in Cambridge.—A lot 240x240, in a desirable location in Cambridge, has been purchased for $2500, and upon it will be erected the hospital for which $10,000 was appropriated by the last legislature.

Consumptive Hospital Report.—The annual report of the Hospital for Consumption of Maryland, shows that 54 cases were treated, of which number 7 were discharged cured, 16 much improved, 16 unimproved, and 15 still under treatment. The hospital is the only one of its kind in the state. A new water system has been installed and a handsome memorial cottage erected by the daughters of one of the directors.

Baltimore.

Contract Let.—The contract for the new clinical building at the Johns Hopkins Hospital (mentioned last week) has been given out. The building will be five stories and will cost $250,000.

Eastern Dispensary.—Dr. R. S. Kirke has been elected resident physician and Drs. Arthur Hedd and A. L. Tumbleson assistants at the Eastern Dispensary. During the past year 21,122 patients have been treated and 15,619 prescriptions have been compounded in the institution.

Kerosene vs. Mosquitoes.—As the city authorities will not do anything in the premises, Dr. Bosley, health commissioner, advises the various improvement associations to make appropriations from their funds for the purchase of coal oil and its distribution over stagnant ponds and other breeding places for mosquitoes.

Anthrax in Baltimore.—A case of anthrax was recently admitted to the Franklin Square Hospital. It was that of a young woman who works in a large hair factory in the suburbs. The disease began in her upper lip, which was cauterized with fuming nitric acid. This is said to be the only case admitted to any of the hospitals here in more than 15 years.

Personal.—Dr. J. A. Seligman has been re-elected visiting physician to the Hebrew Hospital Dispensary for the ensuing year.——Dr. Aaron Friedenwald sailed for Europe, May 20.——Dr. William Osler has been ill with laryngitis for the past two weeks.——Dr. John H. Grimes will sail for Europe, June 21. He will spend the summer in traveling over the continent and Great Britain.——Dr. Charles E. Simon has gone to Chester, Nova Scotia, for the summer.——H. O. Reik is attending a medical convention at Los Angeles, Cal., and Dr. John N. Mackenzie a meeting in Boston.

MICHIGAN.

Saginaw Valley Medical College, Saginaw, graduated a class of 41, including three women, May 21.

Hospital Day at Grand Rapids.—The first "hospital day" at Grand Rapids was a pronounced success, as the receipts exceeded $2600.

Doctor Wins Suit.—The $10,000 suit of Eugene Fowler of Owosso against Dr. Charles D. Smith, Muir, was decided in the Circuit Court in favor of the defendant, May 21. The suit was for alleged malpractice in setting a broken limb, and the feature of the case was the overwhelming preponderance of expert medical testimony in favor of the defendant.

Diphtheria in Michigan.—The State Board of Health has issued a pamphlet relative to diphtheria in Michigan in 1900. The pamphlet embodies comparisons with previous years and includes diagrams illustrating graphically the lessening of diphtheria by isolation and disinfection, especially since the introduction of antitoxin as a curative agent and as a preventive of the disease. Before the use of antitoxin there were about five times as many cases and deaths in outbreaks in which isolation and disinfection were neglected as in outbreaks in which these measures were enforced. Since 1898, when antitoxin began to be employed as a preventive, the cases and deaths have both been lessened, but the cases per outbreak have been lessened much more than the deaths, the average cases per outbreak being greatly reduced in number.

NEW MEXICO.

Hospital Burned.—The just-completed hospital building, drug store and physician's office of the Mescalero Agency, Otero County, was recently burned. It will be rebuilt immediately.

Hospital Addition.—The Santa Fe-Pacific Hospital, Albuquerque, is to be doubled in capacity by a two-story addition, which is already well under way. The increased accommodation is urgently needed, as the hospital has been crowded for the last six months.

Addition to Sanatorium.—Work has begun on an extensive addition to St. Joseph's Sanatorium, Silver City. This institution, which was initiated only last fall, has outgrown its present quarters and the new building is a necessity. The completed building will form four sides of a square or court, in old California mission style. The building will be but one room thick and one story high, with porches outside and inside, upon which the rooms open by means of French windows. The kitchen, dining-room and research laboratory are in separate buildings. A complete hydrotherapeutic apparatus will be installed. The management of the institution is entirely in the hands of the Advisory Board. The immediate care of patients is entrusted to Dr. William T. Williams, and Dr. E. S. Bullock is the pathologist and diagnostician. The plan of treatment pursued is the careful application of the Brehmer principles, in an ideal climatic environment.

NEW YORK.

New York City.

Dr. Joseph S. Carley was struck by an electric car, just as he was leaving the Woman's Hospital, and received a fracture of the nose and of several ribs, and numerous painful bruises.

Beth Israel Hospital.—The new building of the Beth Israel Hospital, at the corner of Jefferson and Cherry streets, was dedicated with appropriate ceremonies May 25, after which the edifice was thrown open for inspection.

New City Hospital for Consumptives.—Commissioner of Charities Homer Folks, in his report for the first quarter, states that since the new hospital for consumptives was opened on Ward's Island on January 31, the wisdom of establishing such an institution has been amply demonstrated. During February and March, 194 patients were received, and those not hopelessly diseased at the time of admission have shown gratifying improvement.

Fund for Study of Cancer.—It is announced that Mrs. Collis P. Huntington has signified her willingness to create a fund of $100,000, the interest of which may be used by the General Memorial Hospital for pathologic research into the nature of cancer. It will be recalled that originally this hospital was known as the New York Cancer Hospital, but the name being objectionable to many and the field too restricted, the present name was substituted.

Donation to Long Island College Hospital.—Mr. Henry W. Maxwell, formerly president of the Board of Regents of this hospital, gave during his life $100,000 toward the erection and maintenance of a training school for nurses. He bequeathed about $3,000,000 to his brother, Mr. J. Rogers Maxwell, who now announces his intention of giving $400,000 for the erection of a new hospital. The new building will be located at Henry and Amity streets, Brooklyn, and will be a modern hospital, of brick, with stone trimmings, the main structure being five stories in height, and the four pavilions being connected by glass-enclosed corridors which will be utilized as sun parlors. After the completion of the new edifice, the name of the hospital is to be changed to the Maxwell Long Island College Hospital.

Buffalo.

Pathologic Section.—Drs. Irving P. Lyon and Jacob S. Otto were elected chairman and secretary, respectively, of the Pathologic Section of the Buffalo Academy of Medicine.

The Buffalo Society for the Prevention of Tuberculosis is desirous of furnishing speakers to such organizations and assemblies as might be interested in the question of tuberculosis and its prevention. Under the auspices of this society, Prof. Herman M. Biggs, medical health officer of Greater New York, addressed a public meeting at the Central Presbyterian Church, May 30, on "Consumption, and How It May Be Prevented." Previous to the meeting a complimentary dinner was given for Dr. Biggs by members of the profession.

OHIO.

New Clinic Hall.—Toledo Medical College expects to build this summer a new clinical building to cost between $5000 and $8000.

Increase of Salaries at State Hospitals.—The senate has made a law increasing the maximum salaries of assistant physicians at state hospitals from $700 to $1200.

Militia Medical Appointments.—The adjutant-general has commissioned Dr. Alden V. Smith, Canton, major and surgeon, and Drs. John S. Stewart, Mansfield, and Harry B. Bertolette, Shreve, as captains and assistant surgeons, and has assigned them to the Eighth Infantry.

Faculty Changes at the College of Physicians and Surgeons.—At the annual meeting of the medical department of the Ohio Wesleyan University, Cleveland, a number of important changes were made in the personnel of the faculty. Dr. N. Stone Scott was made chairman of the faculty; Dr. Albert R. Baker was elected registrar in place of Dr. Henry E. Handerson, resigned; Dr. Guy B. Case was elected treasurer, vice Dr. Joseph F. Hobson, resigned, and Dr. John B. McGee was re-elected secretary.

Personal.—Dr. James M. McGeorge has been appointed assistant physician at the Massillon State Hospital.——Dr. Edward D. Helfrich has located in his old home, Galion.——Dr. Arthur D. Blackburn has decided to open an office in Cuba, Clinton County.——Dr. Frank H. Hurd, Dexter City, has moved to Hiram.——Dr. Carlos C. Booth, Youngstown, has resigned from the staff of the Mahoning Valley Hospital.——Dr. Asa B. Isham, Cincinnati, has been elected commander of the Loyal Legion, Commandery of Ohio.——Dr. Edward S. Wendt, Cincinnati, has been appointed an interne in Speers Hospital, Dayton, Ky.——Dr. Albert W. Binkley, Columbus, has been appointed house physician of the Deaconess' Home, Dayton.——Dr. J. Samuel Shaffer has been appointed interne at the Toledo State Hospital.——Dr. Louis A. Molony, Cincinnati, has been appointed acting assistant-surgeon in the Army and has started for California, en route for the Philippines.——Drs. Frederick C. Vogel and Walter R. Griess have started for Europe for a six months' course of study in Berlin and Vienna.——Dr. P. Maxwell Foshay has been appointed a trustee of the Ohio Hospital for Epileptics, Gallipolis.

PENNSYLVANIA.

Philadelphia.

Reception to Dr. Rixey.—The Medical Club of Philadelphia will give a reception in honor of Dr. Presley M. Rixey, surgeon-general, U. S. Navy, at the Art Club, June 14.

Woman's Medical College.—Twenty-eight students were graduated from the Woman's Medical College of Pennsylvania, May 21. The degrees were conferred by Mrs. Mary E. Mumford, president of the board of incorporators, and the graduates were addressed on the subject of "Recent Advances in Surgery," by Dr. William L. Rodman.

Medico-Chirurgical College.—At the annual commencement of the Medico-Chirurgical College, May 24, a class of 85 was graduated. The degrees were conferred by the president of the board, Edward M. Paxson, LL.D. Rev. John Howard Harris, Ph.D., LL.D., president of the Bucknell University, delivered the doctorate address. On the evening of May 23, the annual alumni oration was delivered by the Hon. W. P. Potter of the Supreme Court of Pennsylvania.

Jewish Hospital.—At the thirty-seventh annual meeting of the Jewish Hospital Association, May 25, it was announced that the cost of maintenance of the institution for the year had been $57,814. A bequest of $40,000 by the late Emily Phillips, to endow the Henry M. Phillips ward, will be used in the erection of a children's hospital. Through generous gifts from Mr. and Mrs. Marx B. Loeb of Philadelphia, a new operating building will be erected and equipped. Meyer Guggenheim, of New York City, has donated $60,000 for a new private hospital. The cornerstones for the latter two buildings, to be erected adjacent to the present hospital structures, will be laid June 1.

Anonymous Benefactions.—A citizen of Philadelphia, whose name is not made public, has given $250,000 toward establishing three training schools for nurses in the South. Another has promised the gift of a farm in Alabama, valued at $100,000, as a site for one of the schools. The project, which is said to involve the expenditure of nearly $2,000,000, is well under way. It is under the supervision of the Philadelphia Training School for Nurses. Dr. Eugene Underhill, a member of the board of directors of this school has, with others, started South, with the view of obtaining the coöperation of leading medical schools, especially in South Carolina, Georgia and Alabama.

GENERAL.

Personal.—Dr. William H. Block, of Manzanillo, Cuba, is on a visit to his home in Baltimore, Md.

Cholera in the Philippines, by dispatches on May 27, had reached the total of 6166 cases and 3813 deaths, of which 1165 cases and 935 deaths were in Manila. One officer has died, the first victim among the officers. Among the Americans to date there have been 25 cases and 20 deaths, while among the Europeans there have been 13 cases and 10 deaths.

Complimentary Dinner to Surgeon-General Sternberg.—A committee of physicians, who feel that the retirement of Dr. Sternberg from the Army should not be allowed to pass without an expression on the part of his many friends of their appreciation of his long and faithful services to the country and to our profession, will, in recognition of his long-continued, varied and important scientific and professional labors and of his high personal character, tender him a dinner at New York City, June 13.

Smallpox.

Illinois: Of the 13 new cases of smallpox discovered in Chicago during the week ended May 24, the same enormous disproportion of colored, heretofore noted, obtained—8 out of the total. None had ever been vaccinated—another illustration of avoidable sickness and probable death "through one's own acts" of omission.——Aurora has 21 cases of smallpox, all mild.

Indiana: Smallpox was the most prevalent disease during April. There were 878 cases reported in 55 counties, and 6 deaths.——The Board of Health of Gas City has issued a proclamation of free vaccination.——The secretary of the State Board of Health, after noting the fact of the presence of more than 800 cases of smallpox in the state, says: "It is my candid opinion that there were over 1,500 cases and very little effort is being made to stop it. Smallpox is costing the state of Indiana thousands of dollars every day through no fault of the officials. It can be controlled absolutely by vaccination if everybody gets vaccinated."

Minnesota: St. Bonifacius has 40 cases and Minnetriska township, near Lake Minnetonka, 30 cases.

Canada: In Simcoe County, between 30 and 40 suspected cases are reported; 3 new cases have developed at Huntsville and a new outbreak is said to have occurred in Cayuga Township, Haldmand County.

Alaska: Within thirteen months 2000 natives along the coast of Alaska have been vaccinated as a preventive of smallpox by the surgeon of the revenue cutter *Rush*, and it is believed that the prompt action and the thoroughness with which the duty was performed had the effect of keeping that scourge out of Southeastern Alaska. With the exception of a few cases on Hooniah Island, the disease has not made its appearance, though the previous year it raged with great severity among the natives along the coast for a thousand miles. The *Rush* will continue the vaccination of the natives during the coming season, for which purpose more than 1000 vaccine points have been shipped to her at Sitka.

The Kentucky State Board of Health, at a meeting at Louisville, May 27, quarantined against the whole state of Indiana on account of a dangerous smallpox outbreak, said to be raging in sixty of the ninety-two counties of that state. Governor Durbin of Indiana refused to act, and as a consequence Kentucky will prevent persons coming from the north entering the state without having a certificate signed by the Indiana State Board of Health.

CANADA.

Appointment.—Dr. Wyatt Johnson, assistant professor of hygiene in the medical department of McGill University, is to be appointed professor of hygiene in succession to Dr. Craik, who a short time ago retired from the office of dean of the department.

A Canadian F.R.S.—Dr. Bovey, dean of the Faculty of Applied Science at McGill University, has been made a Fellow of the Royal Society of Great Britain. Dr. Bovey has been dean of that faculty ever since its foundation in 1878, and has had much to do with bringing it to its present famous position.

Coronation Contingent Must Be Vaccinated.—Every officer and man selected for the Canadian Contingent for King Edward's coronation will have to provide himself before leaving his place of residence with a certificate from a militia medical officer to the effect that he has good vaccination marks, or that he has been recently vaccinated or has had smallpox.

Arranging Hospital Patients According to Religious Belief.—According to the most recent action of the Montreal City Council in regard to the construction of the proposed civic hospital for contagious diseases, the patients will be cared for according to their religious beliefs. The hospital is to be built on the pavilion plan, the pavilions to be so arranged and the nursing staff so divided that the Catholics will be entirely separated from the Protestants.

Medical Item from Labrador.—Dr. Wilfrid Grenfell, the English physician who is devoting his life to the fisherfolk of Labrador, writing to a friend in Montreal, states that there is great destitution among the inhabitants of that country. The work of this medical practitioner ranges from treating a compound fracture to making a pair of boots from the skin of a freshly skinned seal. He has recently had completed the third hospital, viz., that at St. Anthony on the north French shore.

Proposed New By-Law on Vaccination in Montreal.—Another by-law re vaccination will shortly be submitted to the city fathers of Montreal, the one for compulsory vaccination having been rejected by a considerable majority. The new one will provide that vaccination must be performed by duly qualified physicians only, and that proper aseptic methods be employed. The object of this will be to prevent the untoward after-effects from the operation, which seem to have been very prevalent in Montreal during the past outbreak of smallpox and which have had a good deal to do with the neglect of vaccination by the people.

Consumption Sanatorium Burned.—Early on the morning of May 21 the Laurentian Sanatorium at St. Agathe des Monts, about fifty miles from Montreal, was totally destroyed by fire, one woman being consumed by the flames. The sanatorium, owned by Dr. Arthur J. Richer of Montreal, was opened by him about five years ago, and has been doing good work for consumptives in the province of Quebec, being the only institution of its kind in that province. At the time of the fire fifteen patients were undergoing treatment under the supervision of Dr. J. A. Ferguson. As soon as the alarm of fire was given this medical officer, regardless of his own danger, alarmed the inmates and had them conducted and carried to places of safety with one single exception. The sanatorium had accommodation for twenty patients and had a competent staff of nurses. The loss will be in the neighborhood of $15,000.

FOREIGN.

Free Midwifery.—The canton of Tessin in Switzerland has recently passed a law providing for the payment by the state of the fees of midwives.

Reduction of Rates on German Railroads for Persons Traveling to Hospitals or Sanatoria.—The German authorities now grant half fares to members of the sick insurance societies traveling to or from a sanatorium on medical advice; also to poor persons provided with a medical and local certificate as to their destination and poverty.

Two Dollars the Legal Fee in Paris.—A recent legal decision states that ten francs—equal to $1.93—is the customary fee in Paris for the visit of a physician to persons in the medium station of life. The statement was made in a judgment against a physician who had presented her bill at the rate of 20 francs for the first visit and 10 for each subsequent visit.

Deaths Abroad.—Our exchanges report the death of the Berlin professor of ear diseases, Dr. F. Trautmann, Geheimer

Medicinal Rath; of Dr. Römpler, the founder of the celebrated sanatorium for lung diseases at Görbersdorf; Dr. Beely of Berlin, prominent in orthopedic surgery; the professor of surgery at Naples, Dr. Frusci; Dr. Möller of Copenhagen; the professor of physiology at Strassburg, Dr. F. L. Goltz; and Dr. Kalindero, professor of medicine at Bucharest.

Instruction in Anatomy for Women Medical Students.—The German Congress of Anatomy met at Halle, April 22, with a numerous attendance from all the countries of continental Europe. The instruction of women medical students in anatomy was one of the subjects discussed. Those professors who have had most experience in this line were unanimous in favor of separate medical instruction for women, although the women themselves do not wish it.

The Schweninger Affair.—The fine large district hospital of Gross Lichterfeld near Berlin was placed in charge of Schweninger, Bismarck's medical attendant, a man of no scientific qualifications but with considerable political influence. In his administration of the hospital he is said to have ignored the fundamental principles of modern medical and surgical science, and von Bergmann has finally been appointed on a committee to investigate the complaints. He has succeeded in securing the appointment of his former assistant, Dr. H. Stabel, to the position of surgeon in chief to the hospital, to work side by side with Schweninger and enforce modern scientific methods, in spite of his opposition.

Reciprocity in the Privileges of Physicians.—The Italian physicians have been appealing to the government to forbid the practice of medicine in Italy to foreign physicians whose home countries do not allow similar privileges to resident Italian medical men. After considerable discussion the request has been refused, the authorities stating that legislation of this nature would be a step backward, and that foreign physicians are the most effective advertisers of Italy as a health resort. It is interesting to note that almost simultaneously the authorities of Cape Colony have issued a regulation taking this very step, forbidding the practice of medicine in the colony to physicians from countries in which reciprocity is not the rule. Cape Colony is one of the few countries in which there is a scarcity of medical men.

LONDON LETTER.

Decrease of Smallpox Continues.

The number of cases in hospital is 1419 against 1431, 1515 and 1442 in the three preceding weeks; during the week 248 new cases were admitted, against 328, 367 and 250 in the three preceding weeks.

Bovine and Human Tuberculosis.

At the last monthly meeting of the Council of the Royal Agricultural Society of England, Sir Nigel Kingscote presented a report of a subcommittee appointed to supervise experiments conducted at the Royal Veterinary College as to the possibility of infecting bovine animals with tuberculous material obtained from the human subject. The experiments were performed on a cow, two young calves and two yearlings. The virus was injected into the udder of the cow, was given to the calves by the mouth and was injected into the veins of the yearlings. The possibility of infecting cattle with human tubercle bacilli was proved. The bacilli had multiplied in the body of the cow and produced a manifestly diseased condition. In the other animals distinct evidence of tuberculosis could not be found after they were killed, but during life they reacted to tuberculin. This was held to indicate that the infection was of a temporary nature. Taking all the facts into account the experiments were held to show that the risk of infection to cattle from man was slight, but no conclusion as to the converse risk could be drawn.

Cyto-Diagnosis of Pleural Effusions.

At the Edinburgh Medico-Chirurgical Society, Dr. G. L. Gulland read an important paper on this subject. He said that in several kinds of pleural effusion, for example, in empyema, examination of the cells was unnecessary, the pathogenic organisms alone being important. In serous effusions, however, the cells were of importance. For many years it had been discussed whether common acute serous pleurisy was tuberculous, rheumatic, "idiopathic," or due to infection. All ordinary means of diagnosis might be exhausted without deciding the nature of the case. The case might be tuberculous, and the effusion might conceal pulmonary disease. The injection of tuberculin was almost useless for pyrexia was usually present. The sero-diagnosis of tubercle offered so many practical and other difficulties that for practical and other purposes it was useless. In the fresh pleural exudate organisms might be discovered by culture or by the microscope, but the fluid was strongly bactericidal, and after some time the organisms ceased to be capable of cultivation, though they might be found in the fluid. In undoubtedly tuberculous cases tubercle bacilli could be demonstrated only very rarely, either because few bacilli were present, because they were destroyed or rendered incapable of growths by the fluid, or because the effusion was due to toxins rather than the organism itself. To examine the cells of the exudate enough fluid should be obtained with a sterilized syringe to enable it to be centrifuged. If the cells in the effusion were numerous, cover-glass preparations might be directly made. For staining eosin, methylene blue and Jenner's stain were useful. To show granules in polymorphonuclear cells or other changes Sudan, followed by hematoxylin when fat was in question or iodin when glycogen was, had to be used. In established tuberculous pleurisy the microscope showed lymphocytes, erythrocytes, and in some cases a few polymorphs and very few endothelial cells. The lymphocytes ought to be at least half the true cellular elements, while in some cases they were four-fifths or even more. The serous stage of pneumococcic and streptococcic pleurisy and probably of all pyogenic organisms gave the same results—great preponderance of polymorphonuclears, unaltered or degenerated, as the case may be, and often numerous endothelial cells, fresh or degenerated. Erythrocytes might also be present. The relation between the polymorphs and endothelial cells varied greatly in different cases; the more acute the case and the more likely to go on to empyema the more polymorphs as a rule. In edematous effusions, whether from renal or cardiac disease, the cells were few and mainly endothelial. In malignant pleurisy, cells of the growth were present in the fluid, often in large numbers. They were frequently swollen and edematous, and presented abnormalities of the nucleus and fatty degeneration. A certain proportion of the polymorphs were present. Dr. Gulland has found cyto-diagnosis distinctly useful, particularly in deciding the question of tuberculosis.

The Morphia Habit Case: Dr. Law's Expenses To Be Defrayed by Subscription.

This case, in which a nurse unsuccessfully sued her physician because she became addicted to morphia after his prescribing it for her, has been described in THE JOURNAL. At a meeting of doctors called to express sympathy it was stated that Dr. Law's expenses amounted to $3500. Subscriptions amounting to $1800 have already been received from all parts of the United Kingdom and from all classes of the profession. The presidents of the Royal College of Physicians, of Surgeons, the master of the Apothecaries' Society and the editors of the metropolitan medical journals have been requested to act as trustees of the fund for the payment of Dr. Law's expenses.

Physical Deterioration of the Population of Towns.

The recruiting returns for Manchester show in a striking manner that the deterioration in physique of the population of towns which has been frequently asserted is not a produce of alarmist exaggeration. Some three years ago it was found that of 11,000 men examined only 3000 were fit for service. In 1900, of 12,235 applicants only 4030 were fit to serve. In 1901, 11,896 men were examined, of whom only 3076 were accepted. Those rejected were for the most part so ill-developed and poor in physique that it was impossible to take them, though the authorities were anxious to accept as many as possible. The standard is now lower than it has ever been. A minimum chest measurement at full expansion of 33½ in. and a minimum height of 5 ft. 3 in. are sufficient. Many Manchester applicants for enlistment are youths of 18 or 19, average specimens of those living in the poorer parts of the city. The chest measurement is often only 28 or 29 in. and they are undersized in proportion. The recruiting officers think that the principal cause of this want of physique is the habit of cigarette smoking by youths. They come with their fingers stained by cigarettes and nearly all suffer more or less from palpitation of the heart. But this is obviously only one factor of many. These youths are born in the vitiated atmosphere of a town slum, are unsuitably fed as infants, and are brought up in ill-ventilated tenements.

Arsenic and the Increase of Cancer.

To explain the increase of cancer in this country, of which statistics have recently been given in THE JOURNAL, Mr. Jonathan Hutchinson in the *Polyclinic* advocates a very daring and characteristically original hypothesis. Many years ago he made the remarkable discovery that the prolonged use of arsenic gives rise to horny growths (corns) on the palms and

soles which in certain cases terminate in cancer. This observation, at first received with incredulity, has been amply confirmed. It may be remembered that the evidence given before the Royal Commission, which has been published in THE JOURNAL, shows that in addition to the contaminated sugar which was the cause of the epidemic of arsenical poisoning in the North of England and the Midlands there was another source of arsenic in beer—the coke used to dry the malt. The quantity of arsenic derived from this source is, however, very minute. Mr. Hutchinson points out that it is precisely during the period in which coke has taken the place of wood in drying malt that cancer has increased. During this period no doubt a number of cases registered as "peripheral neuritis," "vagabond's melasma," "pernicious anemia" and "multiple cancer of the skin" were due to arsenic. But if the continuous use of arsenic in small medicinal doses can predispose to cancer of the skin there is no good reason for doubting that it may do the same for cancer for other tissues. Probably it is a contributory rather than an efficient cause. There must also be the constitutional tendency, the appropriate age, and in some cases local irritation.

Cancer Research.

The importance of the cancer problem has been well brought before the public and the claims for assistance in research are receiving good response. The latest example of munificence is that of a Dundee manufacturer who has offered to the directors of the Dundee Infirmary $90,000 to erect a cancer hospital containing six wards capable of accommodating 16 to 20 patients and a ward for private patients. He has also offered to guarantee $5000 a year for 5 years for a laboratory for original work in investigation.

Correspondence.

Medical Education for Women.

CHICAGO, May 22, 1902.

To the Editor:—Your editorial on medical education of women in THE JOURNAL, May 17, is evidently written as a friend, but, I fear, a misguided one. You advocate a special curriculum for women, claiming that their peculiar psychophysical status is not met under the present conditions. You wish to exclude major surgery, on the ground that women lack the courage and quick judgment necessary for this work. Is this true? Any one acquainted with the work of medical women knows better. The matter of adaptation of women to major surgery is a matter of individuality, just as it is with men. There are men who faint at the sight of blood and there are women who can do major surgery. I have seen the late Dr. Marie J. Mergler perform a double ovariotomy, through the abdominal route, in a case of sarcoma of the ovaries, each weighing from 5 to 10 pounds. There was extreme ascites, causing dangerous dyspnea in the case, and the patient was in a grave cachectic state. The operator exhibited as much self-possession, courage and good judgment as could be desired in any surgeon, man or woman. The patient made an uneventful recovery. Our cry is "More surgery!" We want just as broad and generous a course as we can get, for we have to work against all odds, having to contend with prejudice against us of the laity, and, I regret to say, some of the profession.

You consider obstetrics the future field of women in medicine. Is it because it is better adapted to the lower physical standard of women? We all know that the art of obstetrics is about as hard a branch of the practice of medicine as there is. It is full of surprises and comparatively poorly remunerated. Does not a podalic version, a symphysiotomy or a Cesarean section require quick judgment and dauntless courage, when we consider that there are two lives at stake? And what about forceps delivery?

You also claim that women prefer men accoucheurs because of the stronger judgment of men and the better advantages they have in obtaining obstetric experience. This is neither true nor fair. Women practitioners, especially those who had the advantage of an interne's service in a woman's hospital, are better prepared for obstetrics than many a man. Obstetrics opens to us many a home, and we are later employed as family physicians. I quite agree with you that women make better pediatricians and that there should be more women in eye, ear, nose and throat work. It will come with increasing hospital facilities for women to specialize.

"Psychology proves," you continue, "that woman's discriminating power and accuracy of movement are inferior to those of men. Perhaps this demonstrated fact explains all these doubts concerning feminine surgery of every sort." But, my dear Doctor, why can not a woman tie a ligature or put in a suture as well as a man? Is it because with her nimble fingers she has been handling the needle and thread in making garments ever since the birth of the race? Read the article in the last issue of the *Woman's Med. Journal*, on "Women in Medicine in Russia," and you will see what women can do even on the battlefield.

At last, we are getting to the climax of this very valuable editorial. "However, the whole question of woman's place in medicine hinges on the fact that when a critical case demands independent action and fearless judgment, man's success depends on his virile courage, which the normal woman has not, nor is expected to have." It is over 35 years since women have first invaded the field of medicine. England, France, Russia, Switzerland, the United States, and lately Germany, have opened the doors of medical schools to women on par with men. Women have demonstrated their ability as students and practitioners and their field of work is growing in scope with every year. Woman in medicine is no longer an experiment. She has come to stay. What we want is a high standard of preliminary as well as of professional training. More surgery, more medicine, more pathology, more bacteriology, etc., more of everything that makes a good doctor. We claim the rights of the individual. There are strong and able—yet normal—women and weak and incapable men.

ROSALIE M. LADOVA, B.S., M.D.

Venetian Bldg.

Young's Modification of My Prostatic Incisor.

BERLIN, GERMANY.

To the Editor:—In THE JOURNAL of Jan. 11, 1902, Young described[1] a modification of my prostatic incisor under the title of "A New Combined Electro-Cautery Incisor for the Bottini Operation for Prostatic Obstruction." According to him the chief advantage of this modification is, that knives of different heights may be used. Young believes to have brought out something new by this, but he is mistaken.

As proof of the above statement, I quote the following from my article of January-February, 1900, entitled: "Neue Mittheilungen zur Galvanokaustichen Radikalbehandlung der Prostatahypertrophie per vias naturales (Bottini'sche Operation)."[2]

"Die *Tiefe* der Schnitte scheint *theoretisch* gegeben durch die Höhe des—bekanntlich messerförmigen—Kauters, gemessen senkrecht zum Schaft. Es muss danach, da die Höhe des als Beispiel gewählten mittleren Lappens eine verschiedene sein kann, zweckmässig erscheinen, Messer von verschiedener Höhe zur Verfügung zu haben. In der That habe ich mir deswegen auch für meinen Gebrauch Incisoren mit verschiedener Höhe des galvano-kaustischen Messers—von 0.8, 1.0, 1.2 und 1.4 bis 1.5 cm. Höhe—anfertigen lassen und treffe zwischen diesen, je nach dem kystoskopischen und dem hierfür noch wichtigeren, *Rektalbefund bei liegendem und nach hinten gewendetem Instrument* eventuell meine Auswahl."

[English translation[3]: "*Theoretically* the *depth* of the incision is represented by the height of the galvanocaustic knife, measured from its tip to the shaft at a right angle. It would seem, therefore, taking as an example the middle lobe, which may vary in size, to be an advantage, to have knives of different heights at our disposal. For this reason I had galvanocaustic knives made for me, measuring from 0.8, 1.0, 1.2 and 1.4 to 1.5 cm. I choose one of these, according to the cystoscopic finding, and, what is still more important, the *rectal*

1. Also in the Johns Hopkins Hospital Bulletin, February-March, 1902.
2. Deutsche Medizinal-Zeitung, No. 1-6, 1900.
3. Translated by Otto M. Schwerdtfeger, M.D., New York.

finding taken after the instrument has been introduced and turned backward."

I added the following note at the time (Foot-note No. 17):

"Als Durchschnitt lasse ich die Instrumente mit Messer von 1.2 cm. Höhe anfertigen, *das jedenfalls die am meisten zu verwendende Messerhohe darstellt*, 0.8 cm. scheint mir entbehrlich, 1.4 bis 1.5 cm. ist für viele Fälle zu hoch und schon deswegen leicht bedenklich, weil naturgemäss mit einer grösseren Höhe des Messers auch die Neigung zu eventueller Verbiegung steigt. Dass man übrigens einen Schnitt auch dadurch weiter vertiefen kann, dass man—in derselben Sitzung oder in einer späteren—noch einmal in dieser Richtung schneidet, braucht nur erwähnt zu werden."

[English translation: "As a rule, my instruments are manufactured with a knife of 1.2 cm., *which represents the height mostly used*, 0.8 cm. seems to me to be dispensable; 1.4 to 1.5 cm. is too high for many cases and has this further disadvantage, that the tendency to bend is naturally greater because of the increased height. It need only to be mentioned that the incision can be deepened by recutting in the incision either during the same sitting or at a later one."]

I treated on the same question in my article[4] on "The Treatment of Hypertrophy of the Prostate Gland by the Galvanocaustic Method after Bottini," in W. H. King's "Electricity in Medicine and Surgery."[5] It may be found on p. 206, and is as follows:

"The depth of the incision is dependent, on the one hand, on the fact that the instrument be firmly pressed upon the prostate gland; on the other hand, on the height of the knife. I possess knives of various sizes, from 0.8 to 1.5 cm. in height and choose between them dependent on the thickness of the prostate gland. As an average size 1.2 cm. is to be designated; my instruments are supplied with this size unless another size is especially ordered. The incision may also be deepened if the instrument is firmly pressed down and the knife is moved to and fro for a second time, along the furrow. In general, however, this is not expedient."

To be sure, I did not have an entirely new instrument made for each different knife; with my instrument, different male parts alone are necessary, the female remaining the same. The only difference between this and Young's is, that in his, a part of the outer end of the male portion remains the same. It is a question if there is any advantage in his arrangement, because the expensive part of the instrument is the platinum-iridium knife, of which one must have several in either case. The disadvantage of Young's is that the male part is made up of two pieces whereby it suffers in simplicity and safety.

In addition, I wish to emphasize that, as my experience increases, I have become convinced that knives of different heights are not of the great significance which I formerly thought, but one averaging 1.2 to 1.3 cm. in height is sufficient for all cases.

I may be allowed, as substantiation of this, to state that in my last 37 cases, as far as I can remember, all—or, at least, nearly all—were operated with a knife of 1.2 cm. height and in these 37 cases (excepting one death, one non-success in a case with a small prostate, and one case which was operated too recently to allow of any opinion on the result) there were 34 successful results, 27 cases being cured and 7 decidedly improved.

At all events, from the above given quotations it is shown that the instrument recommended by Young can not be designated as "A New Electro-Cautery Incisor," but at most as a modification of mine. I must add that Young himself, in a letter to me, correctly recognizes this. He writes (March 24, 1902): "The instrument in question is merely a modification of your own splendid instrument."

ALBERT FREUDENBERG, M.D.

Berlin, S. W. Wilhelmstr. 20.

4. German: "Die Behandlung der Prostatahypertrophie mittels der galvanocaustischen Methode nach Bottini," Sammlung klinischer Vorträge, N. F. No. 328. Published February, 1902. The part referred to can be found on p. 318 of the German issue.

5. New York, Boericke and Runyon Co., 1901.

Inefficiency of Self-Constituted Midwives.

BERLIN, WIS., May 16, 1902.

To the Editor:—I enclose an outline of a little of my experience; if proper to print in our valuable JOURNAL it is at your service.

The testimony presented to the coroner's jury summoned by Justice Biggert to investigate the cause of death of Mrs. John Secoro, who died in child-bed, May 12, showed she flowed to death and that the midwife rendered no assistance. Neither was she fitted by medical knowledge to give assistance in such cases.

The above clipping is from our local paper.

I trust it may seem time to most of us to call a halt, as far as possible, in this matter, as many like instances occur in every large community, due to the inefficiency of self-constituted midwives.

Being summoned, at the last moment, to attend the above case, I found the woman dead. She might have been buried and little thought given to the disastrous consequences overtaking nine little children, but, acting on some thoughts advanced at our last Wisconsin state medical meeting, I asked for an inquest from the head of our local board.

The evidence showed the bed badly saturated with blood, the head of deceased had not even been lowered, nor foot of bed raised, no uterine or heart stimulants given, placenta allowed to remain loose in the uterus, and only slightly attached to its walls, as postmortem revealed; everything was left in a bad state. Yet this midwife has been depended on for years, by a large Polish element in this vicinity, to attend many of them in confinement. We frequently hear it said, "If there be nothing the matter, she is as good as any doctor." How absurd!

It is proper to remark that our mayor promptly ordered the inquest, and the pretended midwife was made to realize her unfitness for these duties. There is no probability that she will again place herself where the court may be likely to demand her presence for such shortcomings. Is not this a fitting way for shutting off such uninstructed officiousness?

This community was very much stirred up over this matter when the facts were brought out. It would have passed comparatively unnoticed without the inquest. Why should this not be the rule?

B. F. DODSON, M.D.

Saratoga Meetings.

Among the meetings to be held at Saratoga Springs during the week of the Association meeting are those mentioned below. Others have received previous notice in these columns.

United States Pension Examiners of the State of New York.—It is announced that the pension examiners of New York will meet at Saratoga Springs, on June 9, at 10 a. m. A brief literary program has been arranged, the principal feature of which will be an address by Medical Referee Raub of Washington, D. C., on "Defects in Reports of Examining Surgeons, with Suggestions for Their Improvement." A very cordial invitation is extended to every pension board in all of the New England and Eastern States to be present at this meeting. While the meeting has been called to consider the advisability of effecting an organization in New York State, it may also prove a favorable occasion on which to organize on a larger plan, so as to include all of the states above mentioned. It is to be hoped that each board will send at least one representative.

American Medical Temperance Association.—The eleventh annual meeting of this association will be held in the parlors of the United States Hotel, Saratoga Springs, N. Y., June 11 and 12, at 9 a. m. The president, Dr. N. S. Davis, Chicago, will deliver the annual address on "The Relations of Alcohol to the Economic, Sanitary and Moral Interest of the Human Family and the True Principles of Legislation Which Should Govern Their Use." The vice-president, Dr. Henry D. Didama, Syracuse, N. Y., will deliver an address on "The Use of Alcohol as a Predisposant and Excitant of Disease and Crime." The third address will be delivered by the second vice-president, Dr. Dudley S. Reynolds, Louisville, Ky., on "The Tobacco Habit as We See It Daily." Other papers will be read by Dr. John H. Kellogg, Battle Creek, Mich., on "The Injurious Effects of Al-

coholic Medication as Shown by Recent Experimental Observations;" Dr. Lewis D. Mason, Brooklyn, N. Y., on "Alcoholic Anesthesia;" Dr. John W. Long, Salisbury, N. C., on "Popular Delusions Concerning the Physiologic Effects of Alcohol;" Dr. John M. French, Milford, Mass., on "A Critical Analysis of the Prescription of Whisky and Strychnin;" Dr. David Paulson, Chicago, on "The Relation between Alcoholic Medication and Drug Addiction;" Dr. Charles H. Shepard, Brooklyn, N. Y., on "Auto-Intoxications from Alcohol;" Dr. Thomas D. Crothers, Hartford, Conn., on "Nerve Injuries Traceable to Alcohol Given as a Medicine," and Dr. N. Roe Bradner, Philadelphia, on "Proprietary Drugs Containing Alcohol." Several papers have been promised from Drs. Fewes, Hall, Comstock and others. The meeting promises to be one of unusual interest. The object of this association is to promote more accurate investigation concerning the action of alcohol in health and disease, and seek to disseminate the most authoritative and well-established facts, as seen from laboratory and bedside experience. A cordial invitation is given to all who are interested to attend this meeting at Saratoga. The secretary, Dr. T. D. Crothers, Hartford, Conn., will be pleased to correspond with anyone on this subject and to send circulars of its work.

The National Confederation of State Medical Examining and Licensing Boards will hold its twelfth annual meeting in the hall of the Y. M. C. A., Saratoga Springs, N. Y., Monday, June 9, 1902, at 9:30 a. m. and 2:30 p. m. Members and ex-members of state medical examining boards, physicians and educators who are interested in the cause of higher medical education are cordially invited to attend. Every state or territorial board whose duty it is to examine or license physicians intending to practice in the jurisdiction of the board is urged to affiliate with the National Confederation, if it has not already done so. The program is as follows :

Address of welcome, Mr. A. P. Knapp, President of Saratoga Springs.

Address of welcome on behalf of the medical profession of Saratoga Springs, George T. Church.

Address of welcome on behalf of the Regents of the University of the State of New York, Albert Vander Veer, Ph.D., M.D., Albany.

Address of welcome on behalf of the State Board of Medical Examiners of New York, William Warren Potter, Buffalo.

Response, by Vice-President Henry Beates, Jr.

Report of the Secretary-Treasurer, A. Walter Suiter, Herkimer, N. Y.

Annual address by the President: Uniformity in Medical Practice Acts, N. R. Coleman, Columbus, Ohio.

The Work of the Regents of the University of the State of New York, James Russell Parsons, Jr., M.A., Secretary of the University.

Divided Examinations for License, Joseph H. Raymond, President of the Medical Council of New York.

Discussion, to be opened by the following members: E. B. Harvey, Boston; E. L. B. Godfrey, Camden, N. J.

What Can Be Done to Regulate the Number of Young Men Studying Medicine? R. S. Martin, Stuart, Va.

The Results of the Medical Law of Tennessee, T. J. Happel, Trenton, Tenn.

Should There Be the Same Examinations for Old Practitioners and for Recent Graduates When Applying for License to Practice Medicine? Maurice J. Lewi, New York.

The Definition of the Practice of Medicine in Medical Practice Acts, Harold N. Moyer, Chicago.

How May the Topics in Examinations for License Be Best Arranged by Examining Boards? Henry Beates, Jr., Philadelphia.

Discussion, to be opened by the following members: William A. Spurgeon, Muncie, Ind.; Gardner T. Swarts, Providence, R. I.

Miscellany.

Children with Three Legs.—Medical journals are mentioning two recently-reported cases of children with three legs. In one, a girl, the third leg grows from the waist and its weight makes locomotion difficult. The other case was accustomed to rest on three feet like a tripod.

Carcinoma and Malaria.—A recent article in the *Cbl. f. Allg. Gesundheit* gives charts showing the mortality from malignant neoplasms and from malaria in Italy. The former is largest in Tuscany and vicinity, while the latter is largest in the southern provinces. The mortality from malaria is therefore highest in the provinces in which the mortality from cancer is lowest, and vice versa.

Perforated Tubes for Intubation.—Some of the disadvantages of intubation are obviated by making a double row of small holes near the center and below. Suffocation is less liable to occur, as the air can pass through these holes even if the tube is obstructed below. The air passing through them also prevents the accumulation of mucus and membranes on the tubes. It is also less liable to be coughed out. These statements made by Dionisi of Turin have been confirmed by his experience with thirty patients using these perforated tubes.

Making Vaccination Fashionable.—Even in medical matters the best method of making progress is to convince people that the desirable thing is popular. To make a good act fashionable it is only necessary to make others think it is fashionable. In London, despite the steady increase of smallpox and all that the profession could do to make people vaccinate, there was an invincible apathy upon the part of the public. Suddenly some member of the stock exchange introduced the practice of wearing a red ribbon about the vaccinated arm as a warning to others not to jostle. At once the custom spread and "a thousand ribboned arms may be met in five minutes anywhere in the city."—*Amer. Medicine.*

A plan for uniformity in state medical organizations has been proposed by the committee of the American Medical Association, composed of Dr. McCormack, Dr. Foshay and Dr. Simmons, and their report is published in the Association JOURNAL of May 3. Without interfering with the proper independence of the individual state societies, their just rights as to conditions of membership, etc., the outline of the constitution and by-laws offered by the committee seems most admirable, and we hope it may be accepted, at least in essentials, by all the states of the Union. In this way may be reached that unity of the entire American medical profession by which alone we can lessen the degrading influence of quackery and aid in the making and execution of laws in a thousand ways affecting the public health. All progressive physicians should do their utmost to carry into execution the recommendations of Drs. Reed, McCormack, Foshay, and Simmons, who have labored so earnestly and nobly in the cause of professional unity and uplifting.—*American Medicine.*

The Profits of a Medical Journal.—The *Münchener medicinische Wochenschrift* is, it is said, owned and published by eleven physicians. Last year profits amounting to 4400 marks were divided among professional aid societies. This year the amount was 9300 marks, 5000 of which was given to the Pettenkofer Memorial Building Fund, and the balance to various societies for the relief of widows and orphans of physicians. Of those who are strangely indifferent to the imperative duty of the profession to own and control its professional journals, we would ask if they see no significance in this fact. Is it good policy or good morals for American physicians to support several hundred medical journals which, because of their number and nonprofessional control, are powerless for good, or powerful only for evil, instead of lifting the few needed to positions of honor and beneficence? There is all the difference in the world between a medical journal published in the interest of the profession and one published in the personal interests of the publisher or editor. It lies wholly in the choice of American physicians whether the policy and the profits of their journals shall be under the control of professional or of selfish motives. The splendid work that might be done by a few professionally-owned journals for the reform of hundreds of abuses, and the furtherance of medical progress should lead every one to subscribe for and contribute to those journals that by reason of their professional ownership and management can not be used for commercial or personal purposes.—*Amer. Medicine.*

Physicians Should Furnish Abstracts of Their Papers.—There is no one capable of doing it so well, and none is so interested in having it done correctly. The writer knows best what is the essential thing in his article and just what needs to be emphasized. Reporters, even the very best, can not possibly know and do the work so perfectly, and especially during the *viva voce* reading. The succinct short epitome in 100 or at most 200 words should be appended to the paper so that editors after its publication may use this instead of the imperfect one each would be compelled to make for his readers. When going to a medical society this abstract should be mani

folded and as many separate slips taken as may be desired by the secretary and the medical stenographers present. By following this plan the reports in medical journals would be more concise and accurate, and every contributor would know that he is correctly reported, and that his bit of experience has been surely and exactly added to the great body of medical truth.—*American Medicine.*

Charaka-Samhita.—THE JOURNAL has mentioned before the translation of the ancient Hindu treatise of medicine which is being published by A. C. Kaviratna at Calcutta. The twenty-fifth and sixth parts have just been received and show that many advanced ideas in hygiene and psychology were promulgated almost coeval with Hippocrates. Those interested in tracing the history of medicine will enjoy this work in its quaint English setting. Charaka says in one place: "Blood is nourished by blood, marrow by marrow, semen by semen and conception is favored by eating the raw fetus of some animal. In case the same substances are unattainable, administer those possessed of the same attributes, for example, in case of anuria give sweet or acid or saline articles and all endowed with laxative properties. For absence of bile, give acid, saline or pungent, articles of alkaline, heating or keen." He enjoins "indulgence with deliberation in all such acts as sleeping, eating, seeing, sporting, moving of limbs." He observes: "It is one thing to have good food and another thing to digest the food one has." About 800 pages have been published to date. The translator is the editor of the *Bengali Medical Journal* and announces that he is a practitioner of the Hindu System of Medicine. His footnotes are not the least interesting part of the work, almost surpassing the parts devoted to anatomy and embryology.

State Boards of Registration.

The Maryland State Board examinations will be held in Baltimore June 11-14.

Mississippi Physicians, to the number of 73, were added to the list of that state's licensed practitioners, out of 153 applicants for the coveted permission.

Manitoba Examinations.—Candidates for license to practice medicine in Manitoba met, to the number of 113, at Winnipeg, May 12, for several days' examination.

The Cherokee National Medical Board for the Central District of the Cherokee Nation will be in session at Tahlequah on June 5 to examine physicians and surgeons desiring to practice.

In Louisiana, May 1 and 2, 65 applicants presented themselves for license by the State Board of Medical Examiners, 57 passed and 8 failed; 4 applicants were colored and 3 failed. There were 7 applicants for license to practice midwifery, 4 of whom were colored; 2 failed, one of whom was colored.

The British Columbia Medical Council held its annual meeting, May 6, at Victoria, and elected the following officers: President, Dr. O. M. Jones, Victoria; vice-president, Dr. R. Eden Walker, New Westminster; registrar, Dr. Chas. J. Fagan, Victoria; and treasurer, Dr. W. J. McGuigan, Vancouver. On May 6 to 8 examination was given 11 applicants for license to practice.

In Rhode Island, the State Board of Health, at Providence, April 3, met 12 candidates, asked 70 written questions on 7 subjects and found only 1 unable to answer 75 per cent. correctly.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
		PASSED.		
154	R.	Tufts Medical College	1894	79.4
155	R.	Dartmouth Medical College	1902	89.1
158	R.	Dartmouth Medical College	1902	89.6
156	R.	Bowdoin Medical College	1901	83.2
157	R.	Bowdoin Medical College	1901	87.5
159	R.	University of Vermont	1898	75.6
160	R.	College of Phys. and Surg., Boston	1899	83.4
161	R.	Baltimore Medical College	1901	80.4
162	R.	College of Phys. and Surg., N. Y.	1890	89.2
163	R.	University Medical School	1889	81.0
164	R.	Non-graduate	....	75.0
		FAILED.		
166	R.	Non-graduate	....	48.4

The North Carolina State Board of Medical Examiners will hold its annual session in Wilmington, beginning June 4, 1902. Physicians desiring examination for license must present a diploma from a college of medicine requiring not less than three years' attendance upon lectures prior to graduation, evidence of clinical instruction and certificates of character. The license fee is $10. The president of the Board is Dr. E. C. Register, Charlotte, N. C.; secretary, Dr. J. Howell Way, Waynesville, N. C.

The Wisconsin Examination of applicants to practice medicine was held at Milwaukee, April 8 and 9 and 120 written questions were asked on 12 subjects. Ten out of 16 applicants passed by attaining the necessary 75 per cent.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
		PASSED.		
1	R.	Rush Medical College	1900	81
6	R.	Rush Medical College	1901	78.8
7	R.	Rush Medical College	1901	84.4
3	R.	Miami Med. Coll., Cincinnati	1884	75.5
5	R.	Louisville Medical College	1887	76.6
9	R.	Louisville Medical College	1902	81
10	R.	Northwestern University	1901	89.3
12	O.	Still College of Osteopathy	1901	76.2
15	R.	University of Minnesota	1889	78.3
16	R.	Maryland Medical College	1901	75
		FAILED.		
2	R.	Omaha Medical College	1893	67.3
4	O.	Am. Sch. of Osteo., Kirksville	1902	57.6
8	R.	Harvey Medical College, Chicago	1901	67.5
11	O.	Still College of Osteopathy	1900	70.6
14	R.	Illinois Medical College	1902	68.6
17	R.	Chicago Medical College	1877	47.3

Confederation of State Examining Boards.—At Chicago, May 20, was held the second meeting of the American Confederation of Reciprocal Examining and Licensing Medical Boards. Representatives from the Wisconsin, Indiana, Illinois and Michigan boards were present and the details for the reciprocal exchange of certificates between Indiana, Wisconsin and Michigan were perfected upon the basis of the two qualifications passed at the January meeting of the Confederation, viz.: 1. That a license or certificate of qualification of at least one year's date and based on presentation of a satisfactory diploma, and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued. 2. That a license or certificate of qualification issued by a state board of registration or medical examiners of at least one year's date, based upon presentation of a satisfactory diploma and on the recommendation of a state board of registration or medical examiners as to the reputability of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a state may be issued. The boards of the above-mentioned states meet in June and will take such action then as will result in the immediate exchange of certificates. Prof. J. B. Murphy, of Northwestern University Medical School, and Prof. John N. Dodson, Dean of Rush Medical College, were present and spoke very strongly in favor of the objects of the confederation. The following officers were elected: President, Dr. J. R. Currens, Two Rivers, Wis.; vice-presidents, Drs. J. M. Dinnen, Fort Wayne, Ind., and W. F. Curryer, Indianapolis; secretary, B. D. Harison, Sault Ste. Marie, Mich.; treasurer, W. A. Spurgeon, Muncie, Ind.; executive council, Drs. Harvey B. Dale, Oshkosh, Wis., William Bell, Belding, Mich., and J. C. Webster, Lafayette, Ind. The constitution is as follows:

ARTICLE I.—The name of this organization shall be the American Confederation of Reciprocal Examining and Licensing Medical Boards.

ARTICLE II.—The object of this confederation shall be to establish reciprocal relations between the medical examining and licensing boards of the states, territories, districts and provinces of the United States; the purpose of which being that thoroughly worthy and well-qualified physicians and surgeons who have been legally authorized to practice under the laws of one of said states, territories, districts or provinces, may be given legal authority and be admitted to practice in any state, territory, district or province represented in this confederation without a repetition of the tests of qualification to which said practitioner has submitted.

ARTICLE III.—The officers of this confederation shall be a president, first and second vice-presidents, secretary and treasurer, whose duties shall be those usual to said offices and who shall be elected annually by the confederation and retain their respective offices until their successors are elected and qualified.

ARTICLE IV.—Additional to the officers mentioned in Article III, there shall be an executive council, composed of an authorized representative of each state board represented in this confederation, whose duty shall be to take advisory oversight of the affairs of the confederation, audit claims and accounts and make recommendations as to the business affairs of the confederation.

ARTICLE V.—Any examining or licensing board of any state, territory, district or province of the United States having a medical practice law requiring an examination before said board and requiring thorough professional qualification as the basis of legal authority to practice in said state, territory, district or province, and providing for interstate reciprocity, shall be eligible to membership in this confederation and may obtain membership by the

signature of its authorized representative to this constitution and maintain such membership by compliance with the requirements of the constitution and by-laws of the confederation.

ARTICLE VI.—The annual dues to the confederation shall be such an amount proportioned among the boards composing the confederation as may be necessary to meet the expenses as found and allowed by the executive council.

ARTICLE VII.—It shall be the duty of each examining and licensing board having membership in this confederation to draft and spread on record in its home office, a resolution embodying the basis of reciprocal recognition of applicants from other reciprocating states.

Married.

GEORGE W. BILLIG, M.D., Chicago, to Miss Glencora Bell of Streator, Ill., May 27.

BERNARD H. LUEHRSMANN, M.D., to Miss Mary Schulte, both of Norway, Mich., May 11.

FRANK A. BROCKMEYER, M.D., to Miss Sadie A. Kelly, both of Canandaigua, N. Y., May 5.

ORA M. RHODES, M.D., Bloomington, Ill., to Miss Myrtle J. Downs, of Elwood, Ind., May 8.

ERNEST H. MADAJESKY, M.D., to Miss Ada Clark McMinn, both of Bessemer, Mich., May 7.

JOSEPH PETTYJOHN, M.D., acting-assistant surgeon, U. S. Army, to Miss Transon Senter, of Humboldt, Tenn., at Portland, Ore., May 1.

Deaths and Obituaries.

Allen H. Hulshizer, M.D., born March 28, 1851, at Hughesville, N. J., died at his home in Philadelphia, May 19, from splenic leukemia. The deceased had been active in his profession in Philadelphia for a quarter of a century, and was unusually successful. His preliminary education was partially acquired at Lafayette College. For several years he was principal of the grammar school of Phillipsburg, N. J. In 1878 he was graduated from Jefferson Medical College, Philadelphia. For five years subsequently he was chief of clinic of the gynecological and obstetrical department at Jefferson. He was one of the original members of the Pennsylvania State Board of Medical Examiners, a position which he retained until January of this year. He was also a member of the medical department of the city civil service board. He had served the alumni association of his alma mater as its president for one term. He was prominent in business and religious circles as well. He was a visiting physician to St. Joseph's Hospital, a member of the medical club of the Medicolegal Society, of the County Medical and State Medical Societies, and of the American Medical Association.

John Charles Earle, M.D. University of Maryland, Baltimore, 1845, a native of Queen Annes County, Maryland, and son of Hon. Richard Tilghman Earle, chief judge of the Second Judicial District of Maryland, died at his home near Easton, Md., May 17, aged 78. He was president of the Easton Board of Trade.

J. Newton Arnold, M.D. Albany (N. Y.) Medical College, 1862, surgeon for four years during the Civil war of the Seventh N. Y. Heavy Artillery, and a member of the American Medical Association, died at his home in Clyde, N. Y., May 17, from heart disease, aged 65.

William H. Andrews, M.D. New York University, 1882, a member of the Hampden Medical Society and of the American Medical Association, died at the House of Mercy Hospital, Springfield, Mass., May 19, from meningitis, after an illness of one week, aged 47.

Ervin L. Soule, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1900, was drowned while canoeing at Stroudwater, May 13. He served for a year on the house staff of Maine General Hospital and then located at South Portland.

Christopher P. Calhoun, M.D. Cincinnati College of Medicine and Surgery, 1873, died, May 18, from paralysis, at his home in Altoona, Pa., aged 60. He was a soldier in the Civil war and had served Bedford County in the state legislature.

Frank R. Reynolds, M.D. Rush Medical College, Chicago, 1884, a member of the American Medical Association, insane from ill health and financial troubles, committed suicide by hanging, in his barn in Eau Claire, Wis., May 22.

Charles S. Morse, M.D. Savannah (Ga.) Medical College, 1870, who had been Clerk of the Supreme Court of Texas for twenty-one years, died at his home in Austin, May 13, after a prolonged illness, from Bright's disease, aged 53.

John A. Elliott, M.D. University of Buffalo (N. Y.), 1897, assistant physician at the Hudson River State Hospital, Poughkeepsie, N. Y., died suddenly from valvular heart disease at the hospital, May 12, aged 31.

John H. Morgan, M.D. University of Pennsylvania, Philadelphia, 1850, a practitioner of Clinton, Ind., died at a hospital in Terre Haute, Ind., May 11, shortly after an operation for anal fistula.

E. Boylston Jackson, M.D. Pennsylvania Medical College, Philadelphia, 1852, for 18 years a practitioner of Menomonie, Wis., died at the home of his daughter in St. Paul, Minn., May 14, aged 75.

Charles Y. Lord, M.D. Dartmouth Medical College, Hanover, N. H., 1877, died at the residence of his brother in Portland, Me., May 12, after an illness of several months, aged 47.

William T. Elder, M.D. Medical College of Ohio, Cincinnati, 1872, died, May 17, at his home in Nashville, Ohio, from the effects of an overdose of morphin, May 17, aged 60.

William R. Harris, M.D. Medical College of Georgia, Augusta, 1887, died at his home in Waterloo, S. C., May 12, from paralysis after an illness of only a few hours.

Walter M. Smith, M.D. Medical College of the State of South Carolina, Charleston, 1892, died, May 12, from neuralgia of the heart, at his home in Liberty, S. C.

Elizabeth P. Hay, M.D. Illinois Medical College, Chicago, 1895, died at Hot Springs, Ark., April 18, from diabetes, after an illness extending over several years.

James N. Clemmer, M.D. Cincinnati Medical College, 1853, a veteran of the Civil war, died at his home in Clarksville, Iowa, April 15, aged 75.

Edgar W. Moorehouse, M.D. Albany (N. Y.) Medical College, 1884, died suddenly at his residence in Peru, N. Y., May 13, from heart disease.

Reuben J. H. Tall, M.D. University of Maryland, Baltimore, 1865, died in Baltimore from consumption, May 12, after a long illness, aged 59.

Nathan E. Hooper, M.D. Kentucky School of Medicine, Louisville, 1884, died suddenly from apoplexy, at his home in Mexia, Texas, May 10.

Major John Brooke, M.D., a retired army surgeon, died suddenly of cerebral hemorrhage, at his home in Radnor, Pa., May 11, aged 72.

Cyrus Smith, M.D. Rush Medical College, Chicago, 1872, died at St. Barnabas' Hospital, Minneapolis, Minn., May 18, aged 70.

Stewart A. Fritts, M.D. Baltimore Medical College, 1893, died at his home in Wilmington, Del., May 16, from typhoid fever.

E. A. Goodsell, M.D., died at his home in Afton, N. Y., from pneumonia, May 13, after an illness of one week, aged 40.

J. H. Jenkins, M.D. University of Nashville, Tenn., 1886, died at his home in Oklahoma City, Okla., May 12, aged 55.

George W. McCoy, M.D. Louisville (Ky.) Medical College, 1883, died at his home in Chrisney, Ind., May 16, aged 48.

Book Notices.

THE ACCESSORY SINUSES OF THE NOSE, Their Surgical Anatomy and the Diagnosis and Treatment of Their Inflammatory Affections. By A. Logan Turner, M.D. (Edin.), F.R.C.S. Ed., Surgeon for Diseases of the Ear and Throat, Deaconess Hospital, Edinburgh. With 40 Plates and 81 Figures. Cloth. Pp. 211. Price, $4.00. New York: Longmans, Green & Co. 1902.

This volume is based on a lecture on the air sinuses of the skull delivered before the Royal College of Surgeons of Edinburgh, and a prize essay on "The Racial Characteristics of the Frontal Sinuses, Based Upon an Examination of 578 Skulls," which received the surgical prize of the Royal College of Surgeons in 1899. The author has added additional observations on the surgical anatomy of the maxillary sinus, the ethmoidal cells, the sphenoidal sinus, etc., also with two chapters on diagnosis and a treatment of the inflammatory affections of the nasal accessory sinuses. We do not notice, however, any mention of the absence of the naso-antral septum which, as Talbot has shown, may be wanting and the antrum simply a cavity directly connected with the nasal passage, or may be

simply a minute cavity situated well to one side, the rest of the hollow of the bone being really a part of the nose. In fact, the variations of these facial sinuses are almost innumerable, and while the author does exceedingly well in pointing out some of the variations of the frontal sinus which have been apparently neglected by other writers, his work is not complete as regards some of the less important but still notable peculiarities that may exist in the antrum.

DISINFECTION AND DISINFECTANTS. A Treatise upon the Best Known Disinfectants, Their Use in the Destruction of Disease Germs, with Special Instruction for Their Application in the Commonly Recognized Infectious and Contagious Diseases. By H. M. Bracken, M.D., Professor of Materia Medica and Therapeutics, University of Minnesota. Second Edition. Cloth. Pp. 129. Price, $1.00. Chicago: Trade Periodical Company. 1901.

Dr. Bracken has within a year found it necessary to bring out a second edition of his very convenient little manual, which fact speaks well for its merits and their appreciation by those who are interested in its subject. It may be taken as an up-to-date exposition of the leading facts of its subject, prepared by a master in the specialty of sanitation. Its author is a little extreme in his precautions in some respects, we hardly think that many sanitary officials—not even smallpox inspectors—utilize the Kuklux suit he says physicians attending infectious diseases should wear, nor do we believe that disinfectors generally adopt the light-of-the-harem costume here illustrated. The recommendations, however, are on the safe side, and we can say that the book is one that ought to go through many more rapidly appearing editions. It is about the handiest and certainly one of the most reliable little manuals of its kind.

GENITO-URINARY DISEASES AND SYPHILIS. For Students and Practitioners. By Henry H. Morton, M.D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital. Illustrated with Half-tones and Full-page Color Plates. Pp. xii-372. Price, extra cloth, $3.00 net. Philadelphia: F. A. Davis Company, Publishers.

This volume of nearly 400 pages, while less elaborate and complete than some on the subject, seems to be reasonably full and to give on the whole a good idea of its subject. It is amply illustrated, and while there are some points in which the author may differ from others it is a good book for the practitioner. For him, in fact, it is intended rather than for the specialist. We do not see any mention, however, of one or two things that are not quite so recent, but that they might have been noticed, such as, for example, the Harris segregator, the relief of kidney tension by nephrotomy and one or two other matters. The author speaks well of one or two methods which we had supposed had rather gone out of favor with most specialists, such as castration and vasectomy for prostatic hypertrophy. He seems to see a large field of usefulness for these operations. On the whole, the book is one that we should say ought to meet with favor by the profession.

STUDIES IN THE PSYCHOLOGY OF SEX. SEXUAL INVERSION. By Havelock Ellis, L.S.A. (England); Fellow of the Medicolegal Society of New York and the Anthropological Society of Berlin. Pp. xi-272. Size, 8⅜x5¾ inches. Extra Cloth, $2.00 net. Philadelphia: F. A. Davis Co. 1901.

The appearance of a second edition of a work within a year or two of its first appearance is usually a sign of its merits, and commands, in a sense, a favorable opinion. In the case of this book this can hardly be asserted—it ought never to have had a second edition. As originally published it had its value—it was a research into a subject of some interest to special students in certain lines, and in their libraries and in the limited reference list of general libraries it had its place. The appearance of this second edition indicates a morbid demand that ought not to have been complied with; the work, out of print, yet still available to those who ought to read it in public libraries, would have been all that science required. We presume, however, that it is profitable to its publishers and it may repeat the record of the ten or a dozen editions of Krafft-Ebing's work, unless Anthony Comstock interferes.

TEXT-BOOK OF ANATOMY AND PHYSIOLOGY FOR NURSES. Compiled by Diana Clifford Kimber, Graduate of Bellevue Training School. Cloth. Pp. 275. Price, $2.50. New York: The Macmillan Co. 1902.

This is the second edition of a book that has already been before the medical public for some years. The author states that it has been extensively revised, and from the assistance she has had we should think that it is thoroughly up to date. What the nurse ought to know in regard to physiology and anatomy seems to be pretty well comprised within these pages. A valuable feature of this book is an extensive glossary at the end. While a large part of the book is given up to the subject of physiology, we notice that the pages are all headed "Anatomy for Nurses," which strikes one as an oversight, though of slight importance. The illustrations appear to be generally very good and are sufficiently numerous to be a valuable aid to the class of readers for which it is intended.

LESSONS ON MASSAGE. By Margaret D. Palmer, Masseuse and Manager of the Massage Department of the London Hospital. Cloth. Pp. 234. Price, $2.00. New York: Wm. Wood & Co. 1901.

This little work appears to be a convenient and fairly good description of massage manipulations and also contains a general treatment of the anatomy, a knowledge of which will be of use to the masseur or masseuse. In fact, a large portion of the book is taken up with this and the part on massage is comparatively brief. The average manipulator will, however, probably find in it all that is absolutely necessary, though there are special matters which are scarcely mentioned. The instructions given are founded upon the results of many years' experience both in teaching and practical work, which fact should be in itself to some extent a guarantee of its value.

QUAIN'S DICTIONARY OF MEDICINE. By Various Writers. Third Edition. Largely Rewritten and Revised Throughout. Edited by H. Montague Murray, M.D., F.R.C.P., Joint Lecturer on Medicine, Charing Cross Medical School. Assisted by John Harold, M.B., B.Ch., B.A.O., Physician to St. John's and St. Elizabeth's Hospital, and W. Cecil Bosanquet, M.A., M.D., M.R.C.P., Physician to Out-Patients, Victoria Hospital for Children. Half Morocco. Pp. 1892. Price, $10.00. New York: D. Appleton & Co. 1902.

The third edition of this standard English encyclopedia on the practice of medicine and allied subjects has been thoroughly revised and new space given to the special branches. The colored plates and cross references between related subjects add to its value. The second edition was in two volumes, and this is in one, and we consider the change not an improvement. Those for whom a foreign work will suffice will find this a valuable book of reference.

A LABORATORY COURSE IN BACTERIOLOGY. For the Use of Medical, Agricultural, and Industrial Students. By Frederick P. Gorham, A.M., Professor of Biology, Brown University. With 97 Illustrations. 12mo. Volume. Cloth. Pp. 198. Price, $1.25 net. Philadelphia and London: W. B. Saunders & Co. 1901.

The study of bacteriology is calling out a numerous list of text-books, and the present volume appears to be one that will meet a demand for an introduction to the subject. It necessarily has its deficiencies, but, within its compass gives apparently a fair exposé of the common laboratory methods. The lack of colored illustrations may seem to some a defect, but on the whole it is well illustrated, and in other respects the make-up is very fine. The book is of a handy size, and this is a decided advantage in the wide range of instruction for which it is designed.

THE CAUSES OF DEATH AMONG THE ASSURED IN THE SCOTTISH WIDOWS' FUND AND LIFE ASSURANCE SOCIETY. From 1874 to 1894 inclusive. Reported by Claud Muirhead, M.D., F.R.C.P.E., Medical Officer of the Society. Cloth. Pp. 81. Edinburgh: R. & R. Clark, Ltd. 1902.

This work embraces the results of a careful study of the mortality of a large assurance society for a period of twenty-one years, and includes a consideration of 9163 deaths. It is worthy of note that in this list no death from appendicitis appears. Considerable space is devoted to the discussion of deaths from consumption and cancer. The death rate from the former is found to be steadily diminishing, while the cancer death rate is as steadily increasing. The work will be found of value to all interested in life insurance problems.

"FIRST AID" to the Injured and Sick. An Ambulance Handbook. By F. J. Warwick, B.A., M.B., Cantab., M.R.C.S., L.S.A., Associate of King's College, London, and A. C. Tunstall, M.D., F.R.C.S. Ed., Surgeon-Captain Commanding the East London Volunteer Brigade Bearer Company. Cloth. Pp. 232. Price, $1.00. Philadephia and London: W. B. Saunders & Co. 1901.

This ambulance handbook possesses certain advantages over the ordinary first aid text-book in that it is neither too diffuse nor too concise. It follows the accepted rule, and contains a great deal of valuable information well and tersely expressed. It will prove especially useful to the volunteer first aid and hospital corps men of the National Guard.

Association News.

Rate of One Fare Plus Two Dollars Granted for Saratoga Round Trip.

As editorially noted in this issue, the Committee on Transportation has secured a further reduced rate to the Saratoga meeting. The Trunk Line Association, and with it the roads east of Chicago, have agreed to the rate of one fare and $2 for the round trip. This will without doubt be agreed to by the Western Association, unless the time be too short for the arrangement. This new rate will do away with certificates. A round trip ticket will be sold from any point east of Chicago and, it is hoped, from any point west, for one fare plus $2. The time limits of these tickets will be the same as previously announced. Tickets will be on sale June 4 to 13, and will be good on a return trip starting not later than June 17. Those who wish to return later than June 17 may deposit their tickets with the Saratoga ticket agent previous to June 17, and, on payment of a fee of fifty cents, have the time extended so as to begin the return trip on or before July 2.

Representatives from State Societies to the House of Delegates of the American Medical Association.

The following have been officially certified to the Secretary as representatives:

Alabama—W. H. Sanders, Mobile; W. M. Wilkerson, Montgomery.
Arizona—
Arkansas—J. A. Dibrell, Little Rock.
California—H. Bert Ellis, Los Angeles.
Colorado—C. K. Fleming, Denver.
Connecticut—
Delaware—Willard Springer, Wilmington.
District of Columbia—George M. Kober, Washington.
Florida—R. D. Murray, Key West.
Georgia—James B. Morgan, Augusta; Floyd W. McRae, Atlanta.
Idaho—Ed. E. Maxey, Boise.
Illinois—
Indian Territory—
Indiana—G. W. H. Kemper, Muncie; Edwin Walker, Evansville; William N. Wishard, Indianapolis; D. C. Peyton, Jeffersonville.
Iowa—
Kansas—J. E. Minney, Topeka.
Kentucky—J. N. McCormack, Bowling Green; Thomas Hunt Stucky, Louisville.
Louisiana—
Maine—Seth. C. Gordon, Portland.
Maryland—William H. Welch, Baltimore; William Osler, Baltimore.
Massachusetts—W. T. Councilman, Boston; H. E. Marion, Brighton; J. Collins Warren, Boston; F. C. Shattuck, Boston; C. H. Williams, Boston; J. F. A. Adams, Pittsfield.
Michigan—H. O. Walker, Detroit; V. C. Vaughan, Ann Arbor.
Minnesota—A. W. Abbott, Minneapolis.
Mississippi—J. C. Hall, Anguilla.
Missouri—
Montana—
Nebraska—H. M. McClanahan, Omaha.
New Hampshire—Ira J. Prouty, Keene.
New Jersey—E. J. Marsh, Paterson; Chas. J. Kipp, Newark; Luther M. Halsey, Williamstown.
New Mexico—G. C. Bryan, Alamogordo.
New York—E. E. Harris, New York; C. A. Wall, Buffalo; H. O. Arrowsmith, Brooklyn; E. D. Ferguson, Troy; Chas. E. Quimby, New York.
Nevada—
North Carolina—James A. Burroughs, Asheville; H. A. Royster, Raleigh.
North Dakota—I. N. Wear, Fargo.
Ohio—
Oklahoma—
Oregon—Andrew C. Smith, Portland.
Pennsylvania—William S. Foster, Pittsburg; George W. Guthrie, Wilkesbarre; A. P. Hull, Montgomery; W. T. Bishop, Harrisburg; H. S. McConnell, New Brighton; John B. Roberts, Philadelphia; William M. Welch, Philadelphia; Webster B. Lowman, Johnstown.
Rhode Island—John Champlin, Westerly.
South Carolina—
South Dakota—
Tennessee—W. Frank Glenn, Nashville.
Texas—H. A. West, Galveston.
Utah—
Vermont—D. C. Hawley, Burlington.
Virginia—
Washington—Park Weed Willis, Seattle.
West Virginia—
Wisconsin—W. T. Sarles, Sparta; J. R. Barnett, Neenah.
Wyoming—R. Harvey Reed, Rock Springs.
United States Marine-Hospital Service—Walter Wyman, Washington, D. C.
Medical Department U. S. Army—D. M. Appel, Ft. Bayard, N. M.
Medical Department U. S. Navy—R. A. Marmion, Washington, D. C.

Delegates from the Sections.

Practice of Medicine—J. M. Anders, Philadelphia; Norman Bridge, Los Angeles.
Surgery and Anatomy—C. A. Powers, Denver; A. D. Bevan, Chicago.
Obstetrics and Diseases of Women—L. S. McMurtry, Louisville; W. H. Humiston, Cleveland, Ohio.
Hygiene and Sanitary Science—
Ophthalmology—J. A. Lippincott, Pittsburg, Pa.; H. V. Würdemann, Milwaukee.
Diseases of Children—S. W. Kelly, Cleveland, Ohio; A. C. Cotton, Chicago.
Stomatology—G. V. I. Brown, Milwaukee; A. E. Baldwin, Chicago.
Nervous and Mental Diseases—H. A. Tomlinson, St. Peter, Minn.; H. N. Moyer, Chicago.
Cutaneous Medicine and Surgery—W. L. Baum, Chicago; W. T. Corlett, Cleveland, Ohio.
Laryngology and Otology—Emil Mayer, New York City; Geo. C. Stout, Philadelphia.
Materia Medica, Pharmacy and Therapeutics—O. T. Osborne, New Haven, Conn.; A. B. Lyons, Detroit, Mich.
Physiology and Pathology—W. A. Evans, Chicago; Alfred Stengel, Philadelphia.

Societies.

COMING MEETINGS.

American Medical Association, Saratoga Springs, N. Y., June 10 to 13.
American Laryngological, Rhinological and Otological Society, Washington, D. C., June 2-4, 1902.
American Surgical Association, Albany, N. Y., June 3-5, 1902.
Louisiana State Medical Society, Shreveport, June 3-5, 1902.
Maine Medical Association, Portland, June 4-6, 1902.
South Dakota State Medical Society, Scotland, June 4-5, 1902.
Wisconsin State Medical Society, Milwaukee, June 4-6, 1902.
Rhode Island Medical Society, Providence, June 5, 1902.
Association of Military Surgeons of the United States, Washington, D. C., June 5-7, 1902.
American Orthopedic Association, Philadelphia, Pa., June 5-7, 1902.
American Academy of Medicine, Saratoga Springs, N. Y., June 7, 1902.
American Association of Life Insurance Examining Surgeons, Saratoga Springs, June 9, 1902.
National Confederation State Medical Examining and Licensing Boards, Saratoga Springs, N. Y., June 9, 1902.
Association of American Medical Colleges, Saratoga Springs, N. Y., June 9, 1902.
American Climatological Association, Los Angeles, Cal., June 9-11, 1902.
American Proctological Association, Saratoga Springs, N. Y., June 10, 1902.
Medical Society of Delaware, Newark, June 10, 1902.
Massachusetts Medical Society, Boston, Mass., June 10-11, 1902.
Medical Society of the State of North Carolina, Wilmington, June 10-14, 1902.
Colorado State Medical Society, Pueblo, June 17, 1902.
American Medico-Psychological Association, Montreal, June 17-20, 1902.
Minnesota State Medical Society, Minneapolis, June 18, 1902.
Medical Society of New Jersey, Atlantic City, June 24-26.
Washington State Medical Society, Tacoma, June 24-26, 1902.
Michigan State Medical Society, Port Huron, June 26-27, 1902.
Medical Association of Nevada, Virginia City, July 7, 1902.
American Ophthalmological Society, New London, Conn., July 16, 1902.

Maryland Public Health Association.—This Association will hold its annual meeting, June 3 and 4, at Denton, and every local board of health has been invited to attend.

Hudson County (N. J.) Medical Association.—Dr. Oliver R. Blanchard, Jersey City, was elected president of this Association at the annual meeting held in Jersey City, May 7.

Tazewell County (Ill.) Medical Society.—A number of physicians of Tazewell County met at Tremont, April 20, and organized this Society, with Dr. William H. Conibear, Morton, as president, and Dr. Carl G. Muehlmann, Pekin, secretary and treasurer.

Winnebago County (Iowa) Medical Society.—The annual meeting of this Society was held at Forest City, May 15. Dr. Charles E. Keeler, Lake Mills, was elected president; Dr. Peter H. Vesterborg, Forest City, vice-president; Dr. Luther Wall, Leland, secretary, and Dr. Gissle M. Lee, Thompson, treasurer.

Gallia County (Ohio) Medical Society.—At the annual meeting of this Society in Gallipolis, May 6, the following officers were elected: Dr. Jehu Eakins, Patriot, president; Drs. Theodore L. Chadbourne, and S. W. Williams, Gallipolis, vice-presidents; Dr. John B. Alcorn, Gallipolis, secretary, and Dr. W. E. Howell, Rio Grande, treasurer.

Genesee County (N. Y.) Medical Association.—At the annual meeting of this Association held in Batavia, May 14, memorial resolutions were adopted regarding the late president of the Association, Dr. Morris W. Townsend, Bergen. Dr. Frank L. Stone, Le Roy, was elected president; Dr. Emerson E. Snow, Batavia, vice-president, and Dr. Annie M. Cheney, Batavia, secretary and treasurer.

Erie County (N. Y.) Medical Association.—A largely attended meeting of the Erie County Medical Association was held at the University Club of Buffalo, May 15. Dr. John Parmenter read a paper on "Colles Fracture," which was discussed by Drs. William Phelps and Eugene Smith. Dr. Julius Ullman read a paper on "Brewers' Yeast in Therapeutics," which was discussed by Drs. De Lancey Rochester and Allen A. Jones.

San Francisco County (Cal.) Medical Society.—At the regular monthly meeting, May 13, Dr. Sanford Blum read a paper on "Endocarditis in Infancy and Childhood." Dr. William F. Cheney read a paper entitled "Lobar Pneumonia in Infancy," giving an extensive narration of the diagnosis. The Society unanimously adopted a resolution providing for affiliation with the State society under its new constitution, in conformity with the plans of the American Medical Association.

Marion County (Iowa) Medical Society.—At the annual meeting of this Society, held May 8, in Knoxville, the following officers were elected: Dr. Benjamin F. Keables, Pella, president; Drs. John V. Brann, Knoxville, Clarence E. James, Durham, and Miles J. Duncan, Pleasantville, vice-presidents; Dr. Corwin W. Cornell, Knoxville, secretary; Dr. Allen J. Nossaman, Pella, assistant secretary, and Dr. John V. Brann, Knoxville, treasurer. At the banquet in the evening Judge Crozier delivered an address on "Expert Testimony."

Kansas Medical Society.—Under the presidency of Dr. Lewis H. Munn, Topeka, this Society met at Lawrence for its thirty-sixth annual convention, May 7. Judge S. A. Riggs welcomed the Society to Lawrence, and Dr. James W. Ryan, Coffeyville, responded. The members were entertained at a banquet and smoker, and also witnessed experiments with liquid air. The following officers were elected: Dr. James W. May, Kansas City, president; Drs. John H. Brierley, Glasco, and Charles S. Huffman, Columbus, vice-presidents; Dr. William E. McVey, Topeka, recording secretary; Dr. Henry O'Donnell, Ellsworth, corresponding secretary; Dr. Lewis H. Munn, Topeka, treasurer, and Dr. Samuel G. Stewart, Topeka, librarian. The 1903 meeting will be held in Concordia.

Nebraska State Medical Society.—The thirty-fourth annual meeting of this Society was held in Omaha, May 6, 7 and 8, under the presidency of Dr. William B. Ely, University Place. Rev. Frederick A. Hatch welcomed the visitors to Omaha, and Dr. James L. Greene, Asylum, responded on behalf of the Society. The president's address was on "The Unity of Scientific Medicine." Elaborate entertainments were given the visiting members and ladies. The next meeting is to be held in Lincoln. The officers for the ensuing year are: Dr. Allen B. Anderson, Pawnee City, president; Drs. Andrew D. Nesbit, Tekamah, and Byron B. Davis, Omaha, vice-presidents; Dr. A. D. Wilkinson, Lincoln, recording secretary; Dr. H. Winnett Orr, Lincoln, corresponding secretary and librarian, and Dr. James L. Greene, Asylum, treasurer.

Arkansas Medical Society.—At the twenty-seventh annual meeting, held in Little Rock, May 13, 14 and 15, the Society was reorganized on the lines recommended in THE JOURNAL of May 3, and the constitution adopted with only a few unimportant modifications. The meeting was well attended and enthusiastic. In addition to the regular program a reception was given by Dr. and Mrs. Edwin and Carle E. Bentley; a tally-ho drive was arranged for the ladies; the retiring president, Dr. Frank Vinzonhaler, gave a reception at his residence, and the annual banquet was given, May 14, under the auspices of the Little Rock Medical Society. The following officers were elected: Dr. Charles R. Shineault, Helena, president; Drs. William N. Yates, Fayetteville, Leonidas Kirby, Harrison, and William A. Brown, Monticello, vice-presidents, and Drs. Joseph P. Runyan, Little Rock, and Richard C. Thompson, Pine Bluff, were re-elected secretary and treasurer, respectively. The next meeting will be held in Jonesboro, May 12-14, 1903.

Buffalo Academy of Medicine.—Prof. Simon Flexner of the University of Pennsylvania addressed the Section on Pathology, May 20, on "Dysentery and Its Causes," Dr. Charles G. Stockton presiding. He stated that since the discovery of the bacillus of dysentery (Shiga) that the pathology of this disease had become much simplified, and that the two causes of dysentery may be divided into a bacillary and amebic form, the bacillary being the form associated with pseudo-membranous formation, the amebic with ulcerations. During the summer of 1900, with a commissioner sent out from Johns Hopkins Hospital, the privilege was granted him and his associates of studying the dysentery of the Philippines, and Shiga's bacillus, which gives the agglutination test with serum of the affected case, could be isolated in all cases of dysentery in United States soldiers. The same was done in some institutional cases in abundance at New Haven, Conn., and at Lancaster, Pa., and in soldiers returning with the disease from the Philippines demonstrating that the cases of dysentery occurring in this country are due to the Shiga bacillus. Professor Flexner stated that great hopes are entertained by him for a serum and for vaccination against the disease. He has already done considerable work in this direction and believes great good can be accomplished. During the coming summer he will experiment on these lines.

The American Therapeutic Society.—The third annual meeting of this Society was held in the New York Academy of Medicine, May 13, 14 and 15, under the presidency of Dr. Reynold W. Wilcox, New York City. A notable feature of the first day's meeting was a symposium on "Valvular Diseases of the Heart." Dr. Thomas E. Satterthwaite, New York City, took up the etiology and symptomatology; Drs. Thomas L. Coley and Albert C. Barnes, Philadelphia, and Dr. William H. Porter of New York City discussed the treatment; Dr. Leonard Weber, New York City, spoke on the prognosis, and Dr. Oliver T. Osborne, New Haven, Conn., took part in the general discussion. The special feature of the second day was a symposium on "The Treatment of Pulmonary Tuberculosis." Dr. George E. Tyler, Denver, Colo., discussed the climatic treatment; Dr. Jesse Shoup, Washington, D. C., the medical treatment; Drs. William H. Porter, New York City, and Olin Leech, Washington, D. C., the dietetic treatment, and Dr. Egbert LeFevre, New York City, the physical treatment. The afternoon session was entirely devoted to a complete series of papers, representing the various specialties, and reporting advances in special therapeutics. The third day was marked by the presentation of an excellent résumé of "The Therapeutic Use of the Organic Extracts," by Dr. Oliver T. Osborne, New Haven, Conn. Dr. De Forest Willard, Philadelphia, also contributed a very practical paper on "The Treatment of Gonorrheal Arthritis. The following officers were elected; Dr. Thomas E. Satterthwaite, New York City, president; Drs. Howard H. Baker, Washington, D. C.; Josiah N. Hall, Denver, and Oliver T. Osborne of New Haven, Conn., vice-presidents, and Dr. Noble P. Barnes, Washington, D. C., secretary.

PHILADELPHIA OBSTETRICAL SOCIETY.

Monthly Meeting, held May 1.

President, Dr. John M. Fisher, in the Chair.

The Etiology and Diagnosis of Fractures in the Newborn.

DR. W. REYNOLDS WILSON, in this paper, said that the common fractures occur in the following order as to frequency: 1, the humerus; 2, the clavicle; 3, the femur; 4, the cranium. Traumatic fracture is usually due to obstetric manipulation. In diagnosis, the possibility of epiphyseal separation, congenital luxation, epiphyseal osteitis of syphilitic origin and obstetric paralysis may increase the difficulty in diagnosis. The infant's cry, indicative of pain, and the disability to motion, swelling, undue mobility, are evidences of fracture. The dif-

ferentiation between fracture and dislocation is sometimes obscured by the presence of fat in overgrown children.

DR. EDWARD P. DAVIS stated that the fractures of the long bones which he had seen had, as a rule, recovered without deformity, the treatment being some simple splint dressing, with a bandage.

DR. L. J. HAMMOND thought that he had seen obstetric fracture from contraction of the vaginal sphincter. Fractures of the newborn, he stated, are often difficult to diagnose, the diagnosis frequently resting only upon the presence of swelling, tenderness and evidence of pain on motion.

DR. WILSON, the author of the paper, pointed out that in extraction of a fetus in breech presentation, the risk of fracturing an extended arm, in bringing it down, is great. He cited a case in which he had difficulty in delivering one of the thighs after version, and in which he believes he avoided a fracture of the thigh by waiting for more complete dilatation of the cervix.

Polyhydramnios.

DR. EDWARD P. DAVIS read an excellent paper entitled "Polyhydramnios; Its Differential Diagnosis and Treatment, with the Report of Cases." By polyhydramnios is meant more than two pints of amniotic liquid at full term. The pathology is not fully known. Many conditions accompany polyhydramnios. The placenta is often large, dropsical and infiltrated, Jungbluth's vessels often enlarged, amnion and chorion may be thickened with extensive fissures in the epithelial layer of the amnion and fatty degeneration of cells. By experiment, seven times more fluid passes through veins than through arteries of cord into the placenta. Any fetal condition causing venous engorgement tends to produce polyhydramnios, as may also irritating substances formed in lymphatics. It does not result from increased renal action in the fetal kidneys. Excessive secretion from the cerebrospinal canal of the fetus may contribute. Polyhydramnios is normal at the fourth month and its persistence results from failure in normal development. By cryoscopy further information regarding the osmotic properties of maternal and fetal blood and of the liquor amnii may increase our knowledge. Bacteriology gives no information.

The diagnosis is made by first diagnosing pregnancy, then by observing that in polyhydramnios we can usually obtain evidence of faint uterine contraction and can often insert the finger through the cervix and detect a presenting part. Ectopic gestation must be kept in mind as polyhydramnios may complicate ectopic pregnancy. In ovarian cyst the illness is longer, the swelling at first unilateral. The intermittent hardening of the tumor is absent and the uterus can be found but little enlarged. In ascites the dulness changes when the position of the patient is altered.

When pregnancy is found, a second diagnosis must be made to recognize or eliminate the presence of pregnancy and ovarian cyst, pregnancy and ascites, plural pregnancy, an hydatid mole, a very large child or a malformed fetus. In hydatid mole, the pear-shaped uterus has little fluctuation and there is repeated discharge of blood. In large or malformed fetus the heart can usually be heard and palpation reveals the child. While twin pregnancy can generally be recognized it may be completely mistaken for polyhydramnios. In exceptional cases, ovarian cyst complicating pregnancy may be difficult to diagnose and exploratory incision may be necessary.

Attention is called to misleading phenomena, the absence of such tension upon the membranes as would be expected from the quantity of amniotic liquid and also the absence of early shortening of the cervix.

Treatment by drugs is without value. When polyhydramnios is slight and not increasing, the patient's health remaining good, pregnancy should not be interrupted. When distention increases rapidly and the patient's health is impaired, under thorough antiseptic precautions the cervix should be dilated sufficient to admit the finger. A pair of uterine dressing forceps, closed, should be inserted and the membranes ruptured, the forceps opened and a rent sufficiently large made to permit the introduction of the finger. Fluid should be allowed to escape very gradually until the presenting part descends firmly against the cervix. Firm pressure must be made over the abdomen by a many-tailed abdominal binder or broad bandage held by assistants. The patient must be watched as labor is often precipitate and the fetus may assume unfavorable positions. Labor should not be hurried in the interests of the child because the fetus is often deformed.

Polyhydramnios is dangerous to the mother from over-distention, relaxation, hemorrhage and increased danger of sepsis. The uterus must be completely emptied and made to contract. A hot intra-uterine douche of 1 per cent. lysol, tamponing with iodoform gauze, the hypodermic use of strychnia and ergot and other stimulation are necessary.

Occasionally, after abdominal section, the excess of amniotic liquid has disappeared by absorption.

Discussion.

DR. E. E. MONTGOMERY said that it is frequently difficult to differentiate this condition from abdominal tumors, especially ovarian cysts. Polyhydramnios affords a tendency to septic infection because of the enormous distention of the uterine walls, causing an anemia of the organ with engorgement of its vessels.

DR. JOHN C. DACOSTA cited a case in which, after the cervix was partly dilated, he had punctured the membranes some distance above the internal os, so that the amniotic fluid escaped slowly.

DRS. STRICKER COLES and LONGAKER reported cases.

DR. DAVIS closed the discussion. He regarded the absence of uterine thinning as due to a hyperplasia of the wall, and the absence of tension of the membranes and of obliteration of the cervix as due to such a degree of uterine distention as to prevent efficient contractions.

Transverse Position with Impaction.

DR. STRICKER COLES next reported six cases of transverse position of the child with prolapse of the arm and impaction. He said that this condition was nearly always due to a neglect of a transverse position, as such cases would rarely terminate by spontaneous version or evolution. When the child's back is posterior the back becomes wedged under the promontory of the sacrum, and to do version, the child had to be pushed entirely out of the pelvis, which was dangerous, as the uterus was in tetanic contraction and would probably be ruptured. When the back was anterior it could be shoved up in a rotary movement, sweeping along the anterior wall of the uterus, causing very little movement of the head and breech. The formation of the wedge, he said, was due to elongation of the child's neck making the head and breech on the same level with the upper arm, the three forming the base of the wedge and the prolapsed arm the point of the wedge. The dangers are rupture of the uterus and sepsis, the latter being often due to pressure necrosis and to the entrance of bacteria before delivery, the labor usually lasting from one to three days.

The treatment the speaker employed was version, under deep chloroform anesthesia, first emptying the bladder and rectum, washing the external genitalia and adjacent parts with soap and water, sterile water, and bichlorid solution, and douching the vagina with 2 per cent. lysol. In cases where the back was posterior, the arm prolapsed and gangrenous, decapitation should be done at once, with long, blunt-pointed scissors or Braun's hook; no attempt at version should be made. After decapitation, traction on the arm would easily deliver the body and the head could then be delivered with forceps. If decapitation is impossible, amputate the prolapsed arm and then bring down the other arm, which may be amputated. This would break up the wedge, and by moving the head slightly upward and inward, the operator can easily bring down the anterior or both feet.

In the first position, back anterior, it is often easy to push the back up and bring down a foot. After delivery, remove the placenta and membranes, douche the uterus with 1 per cent. lysol solution, and pack the uterus with iodoform gauze. This will lessen the danger of hemorrhage, drain the uterus well, and will diminish the danger of sepsis; the gauze is to be removed in thirty-six hours, and the uterus irrigated with 1 per cent. solution of lysol.

If following this there should be rise of temperature and foul lochia, great care should be exercised in curetting and irrigating the uterus, as there will often be found a slough of the uterine wall which extends to the peritoneum, and there will be only the latter separating the uterine and abdominal cavities; the peritoneum, in such a case, would be easily punctured.

Report of Cases.

DR. CHARLES S. BARNES followed with a "Report of Two Cases of Transverse Position of the Fetus with Prolapse of an Arm and Inaction." Both cases had been neglected; the writer was not summoned until the condition existed; and the fetuses were dead. In the first case, the mother was of good muscular and nervous development and was not exhausted; in the second, opposite conditions existed. Both pelves were contracted, and in the latter case there was much relaxation of the uterine and abdominal muscles. Pelvic contraction and muscular relaxation are the causes assigned for the malposition. In both cases delivery was accomplished under chloroform anesthesia, by internal podalic version; in the first, preceded by shoulder amputation of the prolapsed arm. The emptied uterus was douched with 1 per cent. lysol solution and packed with iodoform gauze as a precaution against infection and uterine relaxation and hemorrhage. The first case promptly recovered. The second died within a few hours, of exhaustion from prolonged labor with shock necessarily attending anesthesia and delivery. Necropsy failed to show any lesion; there was general anemia, flabbiness and friability of tissue, indicating little power of resistance.

If the cases had been seen early in labor, the writer believes that the chance of saving both children would have been good, and that the life of the mother lost, would not, in all probability, have been sacrificed. The presence of a midwife was responsible for the death of the mother, in that the summoning of proper aid was thereby deferred too long. Loss of the mother is presented as a warning against major obstetric operations in exhaustion, except they be done with plenty of assistants, fair surroundings, and all the essentials at hand for successful combat against shock.

A few statistics were cited showing that in nearly 23,000 cases of obstetrics 3 per cent. were of transverse position. What is believed to be two of the most common causes of the malposition, pelvic contraction and relaxation of uterine and abdominal walls, were illustrated in these cases.

The author stated that a physician owes it to himself, to his profession, and especially to his obstetric patient, to make it a routine practice to know her pelvic measurements and the position and presentation of the fetus in the latter months of pregnancy. It is only by such painstaking care that the fatal complications of obstetrics, such as result in neglected cases of transverse position, may be minimized. If the condition be diagnosed early and intelligent assistance (some form of version) be rendered, the prognosis for the child is fair, and for the mother good.

Discussion on Transverse Position.

DR. RICHARD C. NORRIS expressed regret that the two speakers in presenting the last subject had not discussed the contraindications for version. He considers Bandl's ring, when present, a contraindication. In such a case he would do embryotomy. For version, he thinks the Trendelenburg position a safeguard against uterine rupture. Amputation of the arm he considers sometimes an advantage, but cautioned against the danger of amputating the arm of a living fetus. While formerly an ardent advocate of intrauterine douching, he now does not employ it and believes it to be of no especial value.

DR. DAVIS stated that he has recourse to Bandl's ring and distention of the lower uterine segment as a danger signal. In such a condition decomposition of the fetal wedge should not be attempted without some form of embryotomy. Chloroform he considers best for version because of its relaxing effect upon the uterine muscles. In regard to intrauterine douching, he does not regard it necessary except in cases where there is pressure necrosis, there has been entrance of air, or there is a tendency to uterine relaxation. Such douching should be followed by packing with iodoform gauze to prevent relaxation and hemorrhage, to promote drainage and to serve as an antiseptic application. The speaker knows of no condition more serious than a case of a dead fetus in a contracted pelvis. He recently lost a mother of shock, the child having been delivered by embryotomy.

DR. NICHOLSON asserted his belief that in too many cases the loss of life was due to neglect or ignorance of those in the profession, and that such an opprobrium should not exist.

DRS. COLES and BARNES closed the discussion.

TEXAS MEDICAL ASSOCIATION.

Thirty-fourth Annual Meeting, held at Dallas, May 6 to 8, 1902.

Statistical Report.

There was a good attendance and the secretary's report showed a membership of 373, to which 175 additions were made during the meeting. The report of the board of examiners stated that the work of registration is proceeding satisfactorily, over one thousand practitioners having enrolled themselves last year, the first year of the board's existence. The treasurer's report showed a balance of about $2000 in the treasury.

Address of Welcome.

An address of welcome was delivered by the Mayor of Dallas, and at a later stage of the proceedings the Governor of the state was introduced and, speaking in the double capacity of a state official and the son of a physician, promised the association all the support in his power in their efforts to put the profession in the state on a higher and more satisfactory plane.

Plan of Reorganization.

The principal business in executive session was the consideration of a revision of the constitution and by-laws with the view of bringing them into harmony with the American Medical Association. The committee presented a majority and a minority report, the point of difference between them being as to whether the members of affiliated societies should be required to be members also of the state association. Both reports were referred to a large representative committee and, after hearing its report, the association decided to leave the whole matter over for another year in order to get a full expression of opinion from the profession. The minority report advocated the plan suggested by the American Medical Association, namely, that all members of affiliated societies should also be required to belong to the state association.

The Treatment of Tuberculosis.

This was the subject of an address by the chairman of the section on general medicine, Dr. J. W. Scott, Houston. As a result of recent progress in the knowledge of the etiology, diagnosis and treatment, physicians approach a case of consumption now with far more hopefulness as to the ultimate outcome than ever before in the history of medicine. Until recently they had treated this disease in a very perfunctory manner, but at the present time the up-to-date physician attacks it with a zeal and earnestness worthy of the foe he is combating. The state of Texas has always made persistent and determined efforts to protect its citizens from yellow fever, but has completely ignored this greater, deadlier and infinitely more common infection of tuberculosis.

The Poisonous Snakes and Spiders of Texas.

Dr. H. W. Crouse, Victoria, in a contribution under this title, presented the results of a long series of experiments, his main object being to furnish the general practitioner with ready means of distinguishing the bites of different kinds of snakes and spiders and of thus being in a position to apply the requisite remedies. The general treatment found most efficacious consisted of permanganate of potassium injected locally and also administered by the mouth, strychnin, small doses of alcohol and rest. The popular idea that alcohol was an antidote was a mistake. Though useful in conjunction with the other remedies mentioned, it seemed when given alone to rather add to the virulence of the poison.

Pneumonia.

A symposium on this subject was given by Drs. R. W. Knox, S. C. Red and R. T. Morris, Houston, the discussion on which showed marked difference of opinion on the value of creosote and the so-called specifics.

Other Papers Read.

The other papers in this section, some of which were read by title, were the following: "The Origin of Sensation and Thought from an Embryologic Point of View," by Dr. J. M. Fort, Paris; "A Comparative Study of the Value of Methylene Blue and Quinin in the Treatment of Malarial Fever," by Dr. John T. Moore, Galveston; "Influenza," by Dr. J. R. Nichols, Terrell; "The Deaf and Blind and What Texas Does for Them," by Dr. M. M. Smith, Austin; "The Action and Uses of Digitalis," by Dr. S. E. Hudson, Austin; "Typhoid Fever," by S. T. Turner, El Paso; "Rheumatism," by Dr. J. H. McCracken, Mineral Wells; "Achlorhydria Gastrica," by Drs. Q. W. McLaughlin and S. M. Morris, Galveston; "Therapeutics of the Glycero-Phosphates," by Dr. H. A. West, Galveston.

Obstetrics and Surgery.

Among the papers read were: "Importance of Early Recognition and Prompt Rectification of Deviations from the Normal Mechanical Evolutions of Labor," by Dr. J. F. Y. Paine, Galveston; "The Management of an Uncomplicated Case of Labor by the General Practitioner," by Dr. W. H. Munday, Terrell; "The Management of the Third Stage of Labor and Hemorrhage," by Dr. B. F. Kingsley, San Antonio; "Fever of the Puerperal State from a Surgical Standpoint," by Dr. Emory Lanphear, St. Louis, and "Hemorrhoids," by James P. Tuttle, New York City. Dr. John O. McReynolds, Dallas, read a paper on "Injuries to the Eye"; Dr. James E. Thompson, Galveston, a paper on "Interscapulo-Thoracic Amputation," and Dr. F. B. Shields, Victoria, reported two cases of cranial injuries.

Jurisprudence and State Medicine.

In the department of medical jurisprudence, "Some Problems of Texas Insane Asylums" were discussed in a paper by Dr. Martin L. Graves, San Antonio. Dr. John L. Turner, Terrell, gave a report on "The Insane and Hospital Management." "The Criminal Insane" formed the subject of a contribution by Dr. G. H. Moody, San Antonio, and in a paper entitled "School Life and Insanity," Dr. J. S. Lankford, San Antonio, made an earnest plea for the revision and classification of school tasks with the view of relieving tender brains on whom they now press with fatal effect. Dr. R. B. Sellers, San Antonio, read an essay on "The Physician as an Expert Witness," and "Subconscious Homicide and Suicide, Their Physiologic Psycology" was the subject of a contribution by Dr. Charles P. Bancroft, Concord, N. H.

In the Section of State Medicine and Hygiene, the chairman, Dr. W. S. Carter, Galveston, commented on the great progress made in recent years in preventive medicine; Dr. F. E. Daniel, Austin, delivered an address on "The Paramount Duty Texas Owes to Her People," and Dr. C. E. Lord, Galveston, who was present as the official representative of the Marine-Hospital Service, read an interesting paper on "The Influence of Flies in the Spread of Typhoid Fever."

Good programs were also presented in the sections devoted to gynecology, ophthalmology, and pathology.

The Prevention of Tuberculosis in Texas.

DR. W. S. CARTER, Galveston, submitted a report from a committee appointed last year to consider the possibility of securing uniform action to prevent the spread of tuberculosis in Texas. A number of recommendations were made, including one for the continued inspection of cows suspected of having the disease. In speaking of the report, Dr. Frank Paschal, San Antonio, of which city he has long been health officer, gave the association a number of statistics that he had compiled during the last thirty years. These showed that tuberculosis was increasing there, and that it had been increasing at a particularly rapid rate since the city became a health resort. It might be supposed that the additional death-rate was due to the mortality among the visitors, but this he proved was not the case. Therefore, it was necessary, he contended, to introduce restrictions to prevent the reckless immigration of tuberculous subjects. Well-to-do consumptives could be provided for, but it was necessary to have a hospital for the indigent patients who came in large numbers to the city, and said in effect, "You must take care of us, or we will sit down on the steps of your houses and die." Many of these people did die, while others wandered from place to place scattering infection. Irrespective of commercial interests, or even from the point of view of their preservation, it was in the highest degree essential that uniform action should be taken to stop the spread of this deadliest of all infections. After further discussion it was agreed to take steps with the view of having health boards properly organized all over the state. In the meantime, as the beginning of a campaign of education, it was voted to spend $200 in distributing literature in regard to the means that should be taken for guarding against the spread of the infection.

New Office-Bearers.

The office-bearers for the ensuing year were elected as follows: President, Dr. S. C. Red, Houston; vice-presidents, Drs. J. E. Thompson, Galveston; Dr. J. E. Gilcreest, Gainsville, and Dr. H. K. Leake, Dallas; secretary, Dr. H. A. West, Galveston; treasurer, Dr. R. F. Miller, Sherman; orator, Dr. M. L. Graves, San Antonio. The secretary, Dr. West, was appointed delegate to the American Medical Association's meeting at Saratoga Springs, and he was given special instructions to do all in his power to induce that body to hold its next meeting in San Antonio, Texas, where the state association will meet next year.

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-second Annual Meeting, held in Quincy, May 20 to 22.

President, Dr. John T. McAnally, Carbondale, in the Chair.

The Profession and the Lay Press.

Mayor Steinbach welcomed the delegates to Quincy, and the various committees made their preliminary reports. The first important paper presented was that of Dr. James W. Pettitt, Ottawa, on "What Should be the Attitude of the Medical Profession Toward the Secular Press?" in which he advised the medical profession to make legitimate use of the press, as that is the only channel through which the public can be reached. He did not consider it unethical for the profession to discuss medical topics in the secular press, nor did he believe it right to ostracize a physician simply because his name appeared in the news column of a lay journal.

DRS. WILLIAM A. EVANS and ADOLPH GEHRMAN, Chicago, presented an interesting treatise on "The Difference Between Human and Animal Blood."

Section Addresses.

DR. ROSWELL PARK, Buffalo, N. Y., delivered the address in surgery, taking for his subject "Surgical Intervention in Borderland Cases."

DR. GEORGE DOCK, Ann Arbor, Mich., discussed in the address in medicine "Pernicious Anemias, Their Diagnosis and Treatment."

DR. CHARLES B. JOHNSON, Champaign, ex-president of the State Board of Health, presented as the address in state medicine "A Country Doctor's Contribution to Preventive Medicine."

New Constitution.

The Committee on Constitution and By-Laws presented a new constitution drafted in conformity with the plan of reorganization proposed by the American Medical Association, which was discussed, amended and adopted.

Amendment to Constitution.

An amendment to the constitution was adopted whereby officers will be chosen in open convention instead of by a nominating committee as heretofore.

Proposed Medical Practice Act.

At the morning session of the second day the Committee on Medical Legislation presented a medical practice act to be submitted to the session of the state legislature. This was also discussed and adopted The bill is exhaustive and creates a

board of seven medical examiners to be appointed by the governor on the recommendation of the incorporated medical society of the state. The members of this board shall receive $10 a day when on actual duty, and a secretary is to be appointed who shall receive a salary to be affixed by the board. The bill provides that no person shall practice medicine or surgery after Jan. 1, 1904, without a license from this board. There is no provision in the bill for licensing those who practice osteopathy, mental healing, Eddyism, etc., but these persons must also pass an examination by the board.

Popular Instruction in Tuberculosis.

DR. GEORGE W. WEBSTER, Chicago, president of the State Board of Health, presented a paper, "What Should We Teach the People in Regard to Tuberculosis?" This paper was of more than ordinary interest, and took the high ground that consumption is not hereditary, but an infectious disease. It will be issued in pamphlet form and circulated by the State Board of Health.

Annual Banquet.

The annual banquet was held at the Hotel Newcomb, May 21, Dr. Denslow Lewis, Chicago, acting as toastmaster.

Election of Officers.

The election of officers resulted as follows: Dr. Malcolm L. Harris, Chicago, president; Dr. Edmund W. Weis, Ottawa, secretary; Dr. James H. Stowell, Chicago, assistant secretary; Dr. Everett J. Brown, Decatur, treasurer, and Drs. Otho B. Will, Peoria, David W. Graham, Chicago, and Edgar P. Cook, Mendota, judicial council.

Delegates to American Medical Association.

Drs. John T. McAnally of Carbondale; Frank X. Walls, Chicago, and Henry P. Beirne, Quincy, were elected delegates to the American Medical Association, and Drs. William F. Grinstead, Cairo; Harold L. Moyer, Chicago, and Otis Johnston, Quincy, alternates. The following were also elected delegates, to serve in case the rules shall allow the state to be represented by eight: Drs. Otho B. Will, Peoria; Elijah A. Morgan, Decatur; John B. Murphy, Chicago; George N. Kreider, Springfield, and Elbert E. Clark, Danville, with the following as alternates respectively: Ernest Mammen, Bloomington; Wilbur C. Wood, Decatur; Arthur R. Edwards, Chicago; Lewis C. Taylor, Springfield, and Benjamin L. Evans, Watseka.

Chicago in 1903.

It was decided to hold the 1903 convention of the society in Chicago, and Dr. Arthur R. Edwards was made chairman of the Committee of Arrangements.

NEW YORK STATE MEDICAL ASSOCIATION.

Fifth District Branch, Eighteenth Annual Meeting, held in New York City, May 6, 1902.

President, Dr. E. Mayer, New York City, in the Chair.

The meeting was well attended. The president delivered the annual address before taking up the routine business.

The Use and Usefulness of the X-Ray in Medical and Surgical Practice.

DR. WALTER M. BRICKNER opened the scientific session with this paper. He said that not only should the physician who aspires to employ the *x*-ray learn to develop his own plates, but he should make himself familiar with the management of vacuum tubes. That quality of a vacuum tube called "penetration" was not altogether dependent upon the degree of the vacuum, at least with new tubes, and it was very important to learn that high vacuum means poor definition, while low vacuum means dark shadows but clearer outlines. It followed that one must learn to regulate the vacuum in fluoroscopy so that, while the shadows are not too dark, the details are sufficiently clear.

Regulation of the X-Ray Tube.

A vacuum suitable for giving satisfactory pictures on the screen is too high for the best results with photographic plates. Increasing experience had taught him to abandon high tubes for fluoroscopic work, and to use a very low tube, even for making radiographs. It was evident from this that the tubes should be capable of easy regulation. The most difficult task was to maintain the vacuum at a desired fixed point during an exposure. He had found that this could be done by varying the quantity of current passing through the tube. The vacuum having been once reduced to a point at which blue light showed in the bulb, a current should be passed of sufficiently high amperage to heat the target somewhat, and so offset the tendency for the vacuum to rise. By manipulation of the rheostat the vacuum could be kept down at the fixed point, or lowered or raised at will. If the electrolytic interruptor were employed, the operator could tell by the pitch of the sound emitted the degree of vacuum present.

X-Ray Burns.

As it was now known that *x*-ray burns do not occur except after unnecessarily long exposures, the operator need not be fearful, though he should still be careful. Ordinarily an exposure of from three to five minutes would suffice. The speaker then quoted a recently-published article of another *x*-ray worker, to the effect that it was safe to estimate that not one patient in a thousand had been injured in the past five years by the *x*-rays, and not one in ten thousand during the past year; also that two-thirds of these injuries had occurred in the first two years of the use of the *x*-ray, and that about one-third of the sufferers were *x*-ray workers. Dr. Brickner added that in his own work at the Mount Sinai Hospital, where several exposures were often made in succession, there had been no *x*-ray burns, though his own hands, from daily exposure to the rays, had been the seat of a mild dermatitis.

Surgical Diagnosis.

To illustrate the surgical uses of the *x*-ray, a large number of pictures were exhibited. One of them was interesting as illustrating a method of determining changes in the teeth and collections of pus in the antrum of Highmore. The method employed consisted in enclosing a piece of kodak film of suitable size and shape in black paper and wrapping this black envelope in a waterproof covering made of surgeon's gutta-percha tissue. The film thus protected is molded against the teeth and alveolar process, and held in place by the tongue. A short exposure was usually sufficient. Several pictures were presented to illustrate the value of the *x*-ray in detecting slight fractures of the bones of the foot, which would otherwise be overlooked. The speaker said that probably the simplest and best method of localizing foreign bodies in the tissues was the comparatively recent one of stereoscopic radiography, still, however, in its infancy.

Medical Diagnosis.

It is now generally admitted that the *x*-rays were of some value in studying diseases of the thoracic organs, and that here the fluoroscope was often exceedingly useful. While in most instances auscultation and percussion would give as reliable information as the *x*-rays, the latter method of examination was a useful means of confirming the results of auscultation and percussion, and sometimes proved of value in correcting those results. If care were taken to minimize the effects of distortion, the fluoroscope could be used advantageously to watch the effects of the Schott treatment of cardiac disease. The nipple and other landmarks should be made prominent by the use of lead wire. The most important use, however, was in the diagnosis of aneurism and of new growths within the thorax. The results of *x*-ray examinations of the abdomen had, for the most part, been unsatisfactory, if one might except the detection of calculi in the ureters and kidneys.

X-Ray Therapeutics.

On this subject, Dr. Brickner said that the *x*-rays could not be regarded as specific in their action on malignant growths, and that the production of a reaction was not essential to the treatment. The successes so far recorded had been chiefly with superficial growths and ulcerations, but these results should make us hopeful for the future of this work.

Discussion.

DR. S. A. KNOPF was not enthusiastic regarding the aid rendered by the *x*-ray in the diagnosis of disease of the lungs. He thought the shadows observed should only be interpreted in the light afforded by the history of the case.

DR. ROBERT NEWMAN cautioned against hasty deductions from radiographs, especially if prepared by non-medical persons. He said that the fluoroscope had decided limitations as compared with the skiagraph.

DR. W. S. GOTTHEIL said that the application of the *x*-ray was by no means innocuous. Recently an amputation in the middle of the thigh had been done in this city because of the injury inflicted by one exposure. He thought bad results were not reported nearly as frequently as they should be.

The Province of the General Physician in Diseases of the Upper Air Passages.

DR. D. BRYSON DELAVAN said that there should be no antagonism between specialism and general medicine. It was impossible for one person to grasp the whole of the vast science of medicine. There was much that the general practitioner could do for diseases of the upper air passages. For example, a man of middle age, of convivial tendencies, was apt to find at the end of a busy season that he was suffering a good deal at night from a general congestion of both nose and throat. These so-called lithemic disorders of the upper air passages should be recognized and appropriately treated. Such a case usually required only moderate rest and recreation, regulation of the diet, and taking of more exercise and perhaps of a few Turkish baths to effect a speedy cure. An occasional cholagogue was, of course, useful in such cases. Again, it should be remembered that, as a rule, constipation was attended by a disordered state of the circulation of the pharynx; indeed, dry pharyngitis and chronic constipation were regularly associated. A supposed lymphoid hypertrophy at the base of the tongue often disappeared under treatment directed towards relieving the disordered condition, quite probably a hyperacidity. Sometimes a person would begin to complain of a sensitive spot at the base of the tongue, or in the middle of the pharynx, and would quickly become melancholy and apprehensive, insisting that malignant disease was developing. Examination would show only a small and highly sensitive area of lymphoid tissue, probably not more than a quarter of an inch in diameter, which would usually be made worse by local treatment. Treatment of the general health, and probably an underlying gouty state, would effect a cure. The speaker said that he had been told by the surgeon of a United States schoolship that whenever that vessel is in New York harbor a large number of the boys are sick with tonsillitis, but that within two days after starting on a voyage the tonsillitis clears up. This hint should not be lost on those in charge of persons with sensitive throats.

Few diseases are more difficult to treat than those of the accessory sinuses; hence the tyro should avoid such cases. On the other hand, a skilled general practitioner could often operate successfully upon enlarged tonsils and pharyngeal adenoids requiring such treatment. Ordinarily, however, the surgical treatment of the upper air passages demanded a familiarity with a special technic which was usually only possessed by the specialist. Greater care in the treatment of an ordinary cold in the head would frequently prevent much misery and subsequent special treatment; this ounce of prevention lay in the hands of the family doctor. He would say to every physician: "If you are clearly able to do a certain thing, do it; if not, let some one else do it who can."

Discussion.

DR. E. MAYER said that he had recently been able to follow a case of acute ethmoiditis developing in a nurse after an attack of the grip. He felt sure that many specialists would have promptly operated, and that as a result the girl would have been suffering from a chronic ethmoiditis. Instead of this he had prescribed rest and the use of soothing and mild antiseptic local applications, with the result that at the present time she was absolutely cured.

DR. A. RUPP said that unfortunately the laity are of the opinion that the specialist can do everything in his particular field and that the general practitioner knows so little about it that he should not be trusted.

DR. W. G. SCHAUFFLER, Lakewood, N. J., said that the general practitioner was largely responsible for the education of the lay public. General practitioners should not be so afraid of specialists and should not experiment for their own good on patients whom they knew could be better and more satisfactorily treated by specialists. He had found that many people were kept too long under the care of specialists in the large cities before being sent to some health resort to recuperate. Many of these persons would have done still better if the specialists had not been so enthusiastic and had left something to nature.

Illustrations of Skin Affections.

DR. W. S. GOTTHEIL gave a lantern exhibition. One photograph was of herpes zoster of one side of the gluteal region, the perineum, the scrotum and the glans penis. This was the only case of the kind that he had ever seen. In connection with the pictures of ichthyosis he said that there were now on record two well-authenticated cases of the cure of this disease by the persevering use of sulphur ointment for from three to five years. The rather rare form of varicella, called varicella gangrenosa, was pictured. One slide showed a case of scabies in which there was a pigmentation of the skin resembling melanoderma. It was the result of long-continued scratching. Another slide showed pityriasis versicolor affecting the face of a colored boy. A second photograph showed pityriasis versicolor on the palm of the hand. This occurred in the person of a physician, and, so far as Dr. Gottheil knew, was the only case of the kind on record.

Officers Elected.

DR. PARKER SYMS, New York City, was elected president; Dr. Charles E. Townsend, Orange, vice-president; Dr. C. S. Payne, Liberty, secretary; Dr. Edmund L. Cocks, New York, treasurer.

CHICAGO SURGICAL SOCIETY.

Regular Meeting, held May 5, 1902.

Dr. Arthur Dean Bevan in the Chair.

Laryngeal Carcinoma.

DR. BEVAN reported three cases. In the first, the disease had existed for a number of months, and radical operation was not thought justifiable. The extension to the esophagus made a tracheotomy necessary to relieve the dyspnea; as the patient could not swallow, it was also necessary to resort to rectal feeding. The case was an example of the work which had been done in the past, certainly up to the time of the celebrated case of the German Emperor. In the second case a preliminary tracheotomy was done and later the larynx was completely removed. The patient was now wearing a tracheotomy tube. He was very much improved by the operation, and was now in a condition to wear an artificial larynx.

Perforation of the Bowel in Typhoid Fever.

DR. G. E. ARMSTRONG, of Montreal, Que., read a paper with this title, by invitation. He said that during the past six years there had been treated in the Montreal General Hospital 932 cases of typhoid fever. Perforation of the ileum had occurred in 24 cases, or 32.3 per cent. In one case of a most malignant type, with tympanites, dulled sensorium and profound toxemia, the perforation was first recognized at the autopsy. In 33 cases the perforation was recognized during life and the opening closed. Five of these recovered. In one other case the patient died five days after operation, and the pathologist reported that death was due to the typhoid toxemia and not to the perforation. If that case be included, there were 6 recoveries in 33 cases, or 18.18 per cent. As to sex, there were 21 males and 9 females. In three cases the sex was not stated. Of those that recovered, 3 were males and 3 females. The number of females in the recovery list was striking.

There were 21 males operated on and 3, or 14¼ per cent., recovered and of 9 females, 3, or 33 1-3 per cent., recovered.

Leucocytosis.

He had not found the presence or absence of leucocytosis a guide to be depended upon. In one case it increased 50 per cent. in the first two hours after perforation. In another case it was only 4600 eight hours after the occurrence of symptoms of perforation. In one case it increased from 4000 to 10,000 in 6 hours. He then made an exploratory incision, and found no perforation, but an apparently acute infection of the mesenteric glands. The patient made a good recovery. In another case it was only 4000 at 11 hours after perforation; 2 hours later the perforation was closed by operation, and the patient recovered. It was a symptom to be carefully observed and considered in association with the presence or absence of other symptoms, but upon which alone no great reliance could be placed.

Operation.

In the Montreal cases, the operation was performed during the first 12 hours in 10 cases, with 4 recoveries, 40 per cent.; second 12 hours in 10 cases, 1 recovery, 10 per cent. Of the 20 cases operated on during the first 24 hours, 5 recovered, or 25 per cent.; during the third 12 hours, in 3 cases and they all died. One case operated on 48 hours after perforation, died; another with operation 68 hours after perforation, died; 1 case, 7 days after perforation, recovered; 7 cases, time after perforation uncertain, died. Of the 6 recoveries, one was operated on 2 hours after the perforation, one 13 hours after, one 8 hours, one 10 hours, one 5 hours, and one 7 days after. The operation in the last case was really nothing more than the opening of an intra-abdominal abscess. Of the 5 acute cases, 4 were operated on during the first 12 hours. So far as his experience goes, it indicates early interference.

Discussion.

DR. FRANK BILLINGS said that perforation of the intestine in typhoid fever occurred in practically 3 per cent. of the cases. The severity of typhoid fever in its clinical course bears no relation to perforation. For instance, those who have the disease in mild form are just as likely to have perforation of the intestine as those who are very sick. Furthermore, the number of ulcers in the intestine bears no relation to the height of the fever or to the severity of the general course of the disease. A patient with typhoid fever might become as deeply toxic from a single as from numerous ulcers of the intestine. He regarded pain as one of the mainsprings of diagnosis in typhoid perforation. Pain might be due to inflammation or infection of the mesenteric glands. These might rupture. In that event, it was practically the same as a rupture of the intestine which required operation. He emphasized the importance of leucocytosis in typhoid fever cases, and if blood counts are taken sufficiently often he thought they might prove of great value. The earlier an operation is performed in cases of perforation of the gastro-intestinal tract, the greater the chance for recovery of the patient.

DR. N. B. CARSON, St. Louis, thinks that many local abscesses form in the lumbar region. We have also so-called psoas abscesses. He has often been impressed that perforation sometimes takes place between the folds of the mesentery and burrows back, forming local abscesses.

DR. E. WYLLYS ANDREWS narrated a successful case and favored early operation.

DR. ALEXANDER HUGH FERGUSON mentioned a case on which he operated for a supposed appendicitis. The patient, while convalescing from typhoid fever, was seized with severe pain in the region of the appendix. A tumor developed and proved to be an abscess which had communicated with the bowel.

DR. L. L. MCARTHUR reported three unfavorable results in fairly early operations. Notwithstanding, he believes that the only proper course is operation as early as possible.

DR. M. L. HARRIS detailed a case with evidences of acute cholecystitis. In examining the blood, he found leucopenia. The absence of the characteristic granules and other evidence suggested typhoid. A Widal reaction was positive, and the case was treated as one of typhoid fever.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

To Prevent Puerperal Convulsions.

T. H. Ross, as noted in *Med. Standard*, emphasizes the importance of maintaining the function of the liver during pregnancy. He thinks that the functional errors of the stomach, liver, etc., lead often to an obstinate constipation, which in turn increases the toxemic condition and the danger. By regulating the liver and maintaining its tone and highest working capacity much discomfort and many ills can be prevented throughout the puerperium, especially that worst of all complications, puerperal convulsions. He advises, in addition to the correct hygiene and dietetics of pregnancy, that the patient be given the following pill once daily.

R.	Enonymin ..... gr. 1/8	008
	Hydrarg. chloridi mitis ..... gr. 1/8	008
	Pulv. ipecacuanhæ ..... gr. 1/8	008
	Aloin ..... gr. 1/12	005
	Podophyllin ..... gr. 1/20	003

M. Ft. pilula No. i. Sig.: One such pill at bedtime.

The amount of the foregoing combination suitable for a given case must be determined by a few nights' use. The best rule is to give enough to cause one natural movement of the bowels daily. If one pill is too much, give a fraction; if too little, double the dose. When there is no indication of autotoxemia it may be given by the above rule, alternate fortnights for months, with benefit to both mother and child in a general way, until the lying-in period is fully accomplished, and even later it will assist in involution and the return to the ordinary conditions of life.

Oxyurides.

The following is recommended by *Med. Orientale* in the treatment of seat worms:

R.	Ung. hydrarg. ..... gr. iss		10
	Adipis benzoinatis		
	Ceræ albæ, āā ..... gr. viiss		5
	Ol. theobrom. ..... ℥ss	2	

M. Ft. suppositorium. Sig.: One such to be inserted daily.

Dentition.

The argument that dentition is a purely physiologic function and therefore can not cause pathologic phenomena is regarded by W. J. Robinson, in *Merck's Archives*, as untenable. When the gums are hot and tense, then frequent rubbing with the following combination will give proper relief:

R.	Potassii bromidi ..... gr. xx	1	30
	Chloralis hydratis ..... gr. x		65
	Tr. aconiti rad. ..... m. v-xv	.30-1	
	Spts. chloroformi ..... ℥i	4	
	Mucilaginis q. s. ad ..... ℥i	30	

M. Sig.: Apply to the gums frequently by rubbing.

At the same time he recommends that the following be given internally:

R.	Pot. bromidi ..... gr. iii-v		20-30
	Chloralis hydrates ..... gr. i-ii		06-12
	Aq. destil. q. s. ad ..... ℥ii	8	

M. Sig.: To be given at one dose by the mouth.

The foregoing mixture may be given in double the size dose per rectum, using starch water as a vehicle.

Diet in Epilepsy.

Davis, in an article on the diet in epilepsy in the *Sys. of Phys. Ther.*, states that the epileptic should be abstemious. Unfortunately, the tendency is to overeat. Epileptics should be taught the relationship between the digestive disorders or constipation and their ailment. Sweets should be avoided. Meat should be restricted to once a day and then in small amounts. The most important thing is the restriction of the

amount of food and the limitation of the variety to those articles that are easy to digest and to absorb. He gives the following sample menu for a day of the epileptic colony at Chelfont St. Peter: Breakfast, oatmeal porridge with new milk, tea, bread and butter; dinner, roast or boiled or hashed beef, mutton or fish, cabbages and potatoes, followed by rice, sago, tapioca, suet or jam roll pudding, tea with bread and butter or dripping or sometimes golden syrup or currant cake; supper, some pudding generally with milk and bread, varied occasionally with soup.

Erysipelas.

In the same journal Dr. Robinson recommends the employment of ichthyol in the treatment of erysipelas. In the mild cases, judging by the exterior extent of the inflammation, the temperature and general constitutional symptoms, the following should be employed:

℞.	Ichthyol	ʒi	30
	Adipis lani q. s. ad	ʒiii	90

M. Sig.: To be applied every hour.

In severe cases, the entire area of inflammation and about one inch beyond should be painted with pure undiluted ichthyol. Outside of this gauze compresses soaked in a 10 to 20 per cent. solution are to be applied every hour. The solution is made as follows:

℞.	Ichthyol	ʒi-ʒii	30-60
	Glycerini	ʒi	30
	Aq. q. s. ad	ʒx	300

M. Sig.: Apply locally on gauze every hour.

The glycerin prevents too rapid drying of the solution and cracking of the skin. Although the pure ichthyol will cause the skin to peel off, yet antipyretics have never been employed when the case has thus been treated from the beginning. The writer, however, employs throughout the course of the disease a saline laxative as follows:

℞.	Mag. sulphatis	ʒi	30	
	Acidi sulphurici dil.	m. xxiv	1	65
	Syr. limonis	ʒi	30	
	Aq. menth. pip. q. s. ad	ʒiv	120	

M. Sig.: Take one tablespoonful every two to four hours as necessary to produce a laxative effect.

Prevention of Oxalic Sediment in the Urine.

G. Klemperer, in *Prog. Phys. Ther.*, suggests a diet which excludes milk, eggs, tea, cocoa and most vegetables, and embraces meat, fats, bread, flour foods, rice, leguminous vegetables, apples and pears. These latter, according to his statement, contain considerable calcium and magnesium, with a minimum of oxalic acid.

Scarlet Fever.

W. T. Corlett, in the *Med. News*, recommends that a tepid sponge bath be given twice a day, followed, when there is itching or desquamation, by inunction from head to foot with cold cream, carbolized vaselin, lanolin, cocoa butter or eucalyptus oil. The following is recommended for the throat:

℞.	Menthol	gr. ii		12
	Thymol	gr. 1/10		0065
	Ol. gaultheriæ	m. ii		12
	Glycerini	ʒiv	15	
	Aquæ q. s. ad	ʒviii	240	

M. Sig.: Use as a spray or gargle.

Cracked ice or irrigation with hot water to which glycerin has been added promotes the comfort of the pharynx. The best antipyretic is cold water, or occasionally quinin or phenacetin, or the cold pack.

The following combination containing iron should be given:

℞.	Tinct. ferri chloridi	ʒii	8
	Acidi hydrochlor. dil.	ʒi	4
	Syr. limonis	ʒi	30
	Aquæ q. s. ad	ʒiii	90

M. Sig.: One teaspoonful every two or three hours; or:

℞.	Liq. ammon. acet.	ʒiss	45
	Potassii chloratis	ʒi	4
	Syr. limonis	ʒss	15
	Aquæ	ʒvi	180

M. Sig.: One to three teaspoonfuls every three or four hours.

Orchitis.

Lutaud, according to *Medicine*, combats the pain of orchitis by the administration of cachets containing seven and a half grains of quinin sulphate. In the majority of cases pain is arrested after the first dose and it is unnecessary to give an injection of morphin. At the same time the following is applied locally:

℞.	Methyl salicylatis	ʒvi	24
	Guaiacol	ʒi	4
	Vaselini	ʒi	30

M. Sig.: Apply locally once or twice a day.

To Prevent Pitting in Smallpox.

T. C. Gibson, in *Medicine*, recommends the following as a superior combination in preventing pitting in smallpox:

℞.	Ichthyol		
	Guaiacol, āā	ʒii	8
	Glycerin	ʒss	15

M. Sig.: Apply locally with a feather three times a day. He states that the earlier it is commenced, the better the effect. The face should be bathed with warm water and soap previous to each application.

Malarial Attacks.

Regnault, as noted in *Ther. Monthly*, states that he successfully treats malarial attacks with a mixture of iodin and potassium iodid as follows:

℞.	Tinct. iodi		
	Pot. iodidi, āā	ʒi	4
	Aq. destil.	ʒiii	90

M. Sig.: Take one tablespoonful at the beginning of the attack and repeat if necessary in twenty minutes. In the cases of irregular malarial fever it is to be considered, according to the author, as a substitute for quinin.

Administration of Quinin in Children.

It is necessary in administering quinin to children, in most instances, to mask the bitter taste and otherwise make the preparation as palatable as possible. The following combinations employed by Lemanski, as reported in *Pediatrics*, are recommended:

℞.	Quininæ sulphatis	gr. x		65
	Aquæ (acidulated)	m. lxxv	5	
	Mellis despumati	ʒx	40	

M. Sig.: One coffeespoonful every two or three hours; or:

℞.	Quininæ hydrochlor.	gr. ivss		25
	Ext. glycyrrhizæ	gr. xlv	3	
	Aq. destil.	ʒx	40	

M. Sig.: To be taken at one dose.

The *Klin. Ther. Woch.* gives the following combination:

℞.	Quininæ sulph.	ʒi	4
	Acidi citrici		
	Syrupi		
	Syrupi aurantii, āā	ʒiiss	10
	Aq. destil.	ʒv	20

M. Sig.: Ten drops to be added to two tablespoonfuls of water and taken at one dose. Sodium bicarbonate may be added and the mixture drunk while effervescing. Dr. Lemanski sometimes prefers the rectal method of administration, the suppository being better tolerated than the enema and causes no smarting or defecation. The following combination may be employed:

℞.	Quininæ sulph.	gr. iss-viiss		09-.5
	Olei theobromatis	gr. xv-xlv	1-3	

M. Ft. suppositorium. Sig.: Insert two daily. In some cases the cocoa butter may be replaced by glycerin solidified by the addition of gelatin.

Medicolegal.

Recovery for Physical Injuries Caused by Fright.—The Supreme Court of Iowa says, in the case of Watson vs. Dilts, that many cases have been before the courts in which the question of a recovery for mental pain alone, and for physical disability produced by fright, unaccompanied by physical impact, have been decided; and the decisions on these questions are in

conflict, though it is probably true that the numerical weight of authority denies the right of action. But the cases so holding are not in harmony as to the reasons given for denying the right of action; some of them hold that the injury is not the proximate result of the alleged negligent or wrongful act, while others refuse a recovery for the reason that it is practically impossible to satisfactorily administer any other rule and serve the purposes of justice. A large majority of the cases which hold to the doctrine that no recovery can be had are cases in which the simple charge of negligence was made, and in many of them no claim was made for physical disability resulting from the fright. In this case, the person sued for damages stealthily invaded the home of the party suing in the night time. When he entered and went to an upper room, she did not know who it was, nor his purpose and intent in thus breaking in. She called to her husband to follow him, which he did; and, in her apprehension of danger, she followed her husband up to a room, where she found them in what appeared to be an encounter, and an assault upon her husband. From her great fright thereat, she averred that her nervous system completely gave way, and that she suffered physical injuries from the fright. The court says that its attention has not been called to any case where the facts averred precisely paralleled those in this case, nor has it discovered anywhere the facts alleged so strongly condemn the unlimited rule contended for that no recovery can be had for physical injuries caused by fright. The object of the invasion of the home in such manner was immaterial. Suppose that the object was to ransack the house, and steal therefrom; that the man went in masked, and with a deadly weapon in his hand. His discovery there under such circumstances might well cause alarm to the boldest man, and, if it produced nervous prostration and physical disability, the theory, no matter what its reason, that would say there was no actionable wrong, the court says, would be too fine spun and too cold for its sanction. Nor could it be said, under such circumstances, that the prostration resulting from the fright so caused was not the proximate or probable result of the party's act. It is within the common observation of all that fright may, and usually does, affect the nervous system, which is a distinctive part of the physical system, and controls the health to a very great extent, and that an entirely sound body is never found with a diseased nervous organization; consequently, one who voluntarily causes a diseased condition of the latter must anticipate the consequence which follows it. The nerves being, as a matter of fact, a part of the physical system, if they are affected by fright to such an extent as to cause physical pain, it seems to the court that the injury resulting therefrom is the direct result of the act producing the fright. But each case must, of necessity, depend on its own facts.

Evidence Derived from Tests of Extent of Injuries.—In Missouri, Kansas & Texas Railway Company of Texas vs. Johnson, a personal injury case brought by the latter party, a bill of exceptions showed that a physician was introduced as a witness in this party's favor, and testified that about six months before the trial he had examined him for the purpose of ascertaining the nature and extent of his injuries, not for treatment, but only in order to qualify himself to testify as an expert in the trial; that on such examination the party complained of suffering considerable pain in certain portions of his back and, when the witness would stick pins into him along his right leg, he would exhibit no signs of suffering pain, but when he would stick pins into him at corresponding places on his left side, he would flinch and complain a great deal. The Court of Civil Appeals of Texas thinks that it must be held that the complaint of the party was the natural expression produced by the pain then existing, and that, this being so, the complaint was part of the res gestæ or essential circumstances of the transaction, and not hearsay, and that the objection to it that it was self-serving could not be sustained. Likewise, it holds that the testimony of the physician to the effect that he stuck pins into the party's right leg, and that he showed no signs of suffering pain, was properly admitted. It says that the party had a right, even pending the litigation, to have all proper examinations and tests made to ascertain the nature and extent of his injuries, and the result thereof could be proven on the trial. This was the matter under investigation, and how the party bore the tests was a part of the transaction and clearly admissible. It was a question for the jury to decide, in the light of circumstances shown to have attended the experiment, whether his indifference to pain was simulated. No statement of his that it did not hurt him to stick pins into his right leg was admitted. Only the negative fact that he did not flinch when the test was applied went to the jury, and it was not error to admit such evidence. The testimony of the physician that when he stuck pins into the party's left leg he flinched and complained of pain simply tended to show a normal condition of that part, a fact which would have been presumed without such test and proof. Whether this was a necessary part of the transaction—that is, of the examination—might be doubted, but it could hardly have been injurious to the company. The Supreme Court of Texas affirms the judgment in favor of the party suing. It does not, however, directly pass upon the points above decided because it does not consider the objections taken at the proper time, having been made before the evidence objected to was introduced. That the mere declarations of a party suing of the fact of his suffering pain, made to an expert, on an occasion prepared by himself, for the sole purpose of furnishing the expert with information on which to base an opinion favorable to him, are not admissible, it says, is held by many authorities which seem to be better supported by reason than those taking a contrary view. But the authorities referred to admit that exclamations, shrinkings, and other expressions of a party which appear to be the instinctive or spontaneous betrayal of pain are admissible, although they be made under circumstances such as those disclosed here. Nearly all of the statements of the physician of the acts and expressions of the party suing, it adds, belonged to this class, and the manner in which his evidence was stated in the statement of facts made it doubtful if the declaration of pain in the back was not produced by manipulations or tests applied by the physician.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal, May 17.

1 Subcutaneous Injection of Paraffin in the Correction of Nasal Deformities. Harmon Smith.
2 The Clinical Aspect, Symptoms and Differential Diagnosis of Osteomyelitis. R. Tunstall Taylor.
3 *The Surgical Treatment of Bright's Disease. Ramon Guiteras.
4 Why Doctors Disagree; A Plea for a Modern Code of Ethics. Bittle C. Keister.
5 Hypnotism a Useful Aid in the Treatment of the Morphin Habit. Sigmund A. Agatston.

Philadelphia Medical Journal, May 17.

6 *A Case of Hematoporphyrinuria. James Tyson and Alfred C. Croftan.
7 Polyhydramnios; Its Differential Diagnosis and Treatment, with the Report of Cases. Edward P. Davis.
8 Diabetes Insipidus, Twin Pregnancy, Polyhydramnios and Post-Partum Hemorrhage. George De Tarnowsky.
9 Some Problems in Municipal Sanitation from an Executive Standpoint. William C. Woodward.
10 *The Importance of the Lachrymal Reflex in the Diagnosis between Organic and Hysterical Anesthesia of the Face. William G. Spiller.
11 *Some Reasons for Considering the Vermiform Appendix as a Gland. Clarence L. Killbourn.
12 Report of a Primary Sarcoma of the Small Intestine. Arthur W. Booth.
13 Asthenopia; Graduated Tenotomy; Prisms. Norburne B. Jenkins.

Medical News (N. Y.), May 17.

14 *Etiology of Paresis. Arthur W. Hurd.
15 *The Comparative Frequency of General Paresis. Charles G. Wagner.
16 The Early Diagnosis of Paresis. F. X. Dercum.
17 Treatment of Paresis; Its Limitations and Expectations. Edward Cowles.
18 Sclerotomy; Anterior and Posterior; When Indicated in Glaucoma; Method of Operating. David Webster.
19 *A Danger from the Employment of the Weighted Vaginal Speculum. Frederic Griffith.
20 Orthopedic Operations for Intractable Cerebrospinal Cord Lesions, with Report of Two Cases. Homer Gibney.

Medical Record (N. Y.), May 17.

21 So-called "Joint Derangement" from Movable Bodies in Joints. Joseph D. Bryant.
22 *A Few Cases of Penetrating Stab Wounds of the Abdomen. Joseph B. Bissell.
23 *Prophylaxis in Pneumonia. H. R. Tuthill.
24 *The General Complications and Sequelæ of Measles. Adolph Rupp.
25 Eye Complications of Measles and Their Treatment. D. H. Wiesner.
26 Cerebral Abscess. C. E. Ruth.
27 *A Report of Experiments Made with Cargile Membrane, for the Purpose of Determining Its Value in Preventing the Formation of Peritoneal Adhesions. Robert T. Morris.

Boston Medical and Surgical Journal, May 15.

28 Birth and Death-Rate as Influenced by Obstetric and Gynecic Progress. (To be continued.) George J. Engelmann.
29 *Amaurosis (Atrophy of the Optic Nerve) and Its Treatment by the Subcutaneous Injection of Strychnia. Hasket Derby.
30 *Diseases of the Ear of Interest to Insurance Examiners. Philip Hammond.

Cincinnati Lancet-Clinic, May 17.

31 Local Anesthesia. Horace J. Whitacre.
32 Report of Cases in Which Glycozone Was Used. E. C. Roemele.

American Medicine (Philadelphia), May 17.

33 *The Future of Obstetrics as a Specialty in America. Barton C. Hirst.
34 *Acquired Incomplete and Complete Prolapse of the Uterus and Vagina in Nulliparous Women. Henry D. Beyea.
35 A Case of Fracture of the Neck of the Femur in a Man 76 Years Old, Treated with the Thomas Hip-Splint; Perfect Recovery in Ten Weeks. John L. Porter.
36 *Goiter: Medical and Surgical Treatment. Thomas P. Scully.
37 The Sodium Tungstate Test for Combined Chlorids. A. L. Benedict.
38 Vaccination from the Standpoint of the Surgeon. Ernest J. Mellish.
39 Raynaud's Disease. Emil King.
40 A Comparative Climatic Study of the Arid and Semi-tropic Southwest and Its Relation to Tuberculosis. (Concluded.) William W. Betts.

St. Louis Medical Review, May 10.

41 Case of Impacted Urethral Calculus in a Boy of Four Years. J. S. Triplett.
42 Impacted Calculus in the Female Urethra. F. C. Ameiss.

May 17.

43 *Therapeutic Value of Work in Hysteria and Neurasthenia. Sidney I. Schwab.

Medical Age (Detroit, Mich.), May 10.

44 The Woman of the Hour—The Trained Nurse. G. Frank Lydston.
45 Recurrent Hyperplastic Tissue in Orbit Following Enucleation, Preventing Use of Artificial Eye; with Report of a Case. C. C. Stephenson.
46 Indications for Tannigen in Medical Practice. Richard Friedlander.

Medical Fortnightly (St. Louis), May 10.

47 Facial Paralysis: Epilepsy with Pronounced Stigmata of Degeneracy: Partial Paralysis; Cerebral Paralysis with Marked Aphasia; Cerebral Syphilis. Daniel R. Brower.
48 A Note on the Application of Litholapaxy of Lithotrity to Stone in the Bladder in the Canine Species. Reginald Harrison.
49 Intemperance and Life Insurance. C. F. Wahrer.
50 Epilepsy. F. Savary Pearce.
51 Bronchial Stenosis. Albert Abrams.

Journal of Nervous and Mental Diseases (Nyack, N. Y.), May.

52 *The Muscular Factors Concerned in Ankle Clonus. S. Weir Mitchell.
53 *Two Unusual Forms of Clonus: Toe Clonus and Lateral Ankle Clonus. John K. Mitchell.
54 A Case of Cholesteatoma of the Brain. Charles L. Allen.
55 *A Case of Primary Degeneration of the Pyramidal Tracts. William G. Spiller.
56 Report as to the Condition of a Man Through Whose Right Cerebrum a Bullet Passed from Before Backward Eleven Years Ago. Theodore Diller.
57 Report of a Case of Fracture of the Base of the Skull Followed by Meningitis and Organic Hemiplegia, Associated with Coma and Catalepsy Lasting Eighteen Months. Arthur C. Brush.

Bulletin of the Johns Hopkins Hospital (Baltimore), May.

58 The Effect of Certain Poisons on Inorganic Ferments. Harry C. Jones.
59 Greek in Medicine. Achilles Rose.
60 On Syphilitic Disease of the Cerebral Arteries. F. C. Goldsborough.
61 Para-Colon Bacillus. Richard P. Strong.
62 A Case of Multiple Primary Adenocarcinoma of the Liver with Cirrhosis. Catherine H. Travis.
63 Concerning an Improved Method of Making Collodium Sacs. Norman MacLeod Harris.

Annals of Surgery (Philadelphia), May.

64 *Thoracic Injuries Involving the Lungs. William G. Le Boutillier.
65 Fracture of the Carpal Scaphoid with Dislocation Forward of the Central Fragment. Lewis A. Stimson.
66 *Treatment of Dislocation of the Clavicle Through Open Wound. James E. Moore.
67 Subcutaneous Injury of the Brachial Plexus. Percival R. Bolton.
68 Chronic Phagedena Due to Mixed Infection. H. R. Loux and W. M. L. Coplin.
69 *Hour-Glass Stomach. John M. Elder.
70 Rupture of the Axillary Vein in Reducing an Old Dislocation of the Shoulder. Francis J. Shepherd.
71 Pus Dilatation of One Member of a Double Ureter. John C. Munro.
72 Intestinal Suture. Archibald MacLaren.
73 *The Curative Effect of Trephining Per Se. Charles J. Aldrich.
74 *A Contribution to the Surgery of Spina Bifida. Van Buren Knott.

Cleveland Medical Journal, April.

75 A Case of Perforated Gastric Ulcer. C. A. Hamann.
76 Case of Brain Tumor. L. G. Leland.
77 Spasmodic Wryneck Appearing in the Course of a Case of Exophthalmic Goiter. Walter G. Stern.
78 A Case of Compound Fracture of the Skull. Asher F. Sippy.

Journal of Medical Research (Boston), May.

79 *The Analogies between Plimmer's Bodies and Certain Structures Found Normally in the Cytoplasm. E. R. LeCount.
80 The Endothelial Phagocytes of the Tonsillar Ring. J. L. Goodale.
81 On the Active Principle of Jamaica Dogwood. M. Vejux-Tyrode.
82 The Lymphomatous Tumors of the Dog's Spleen. Herbert U. Williams and Frederick C. Busch.
83 *Upon an Extensive Outbreak of Food Intoxication and Infection of Unique Origin. A. P. Ohlmacher.
84 The Histologic and Histogenetic Features of a Malignant Medullary Hypernephroma of the Kidney. Joseph C. Ohlmacher.
85 A Preliminary Note upon Certain Mechanical Microtechnical Factors Concerned in Producing Segmentation and Fragmentation of the Myocardium. Walter H. Buhlig.
86 The Changes Produced in the Hemolymph Glands of the Sheep and Goat by Splenectomy, Hemolytic Poisons and Hemorrhage. Aldred S. Warthin.
87 The Blood Vessels of the Submaxillary Gland and Their Development. Joseph M. Flint.
88 *Tetanus and Vaccination—An Analytical Study of Ninety-five Cases of This Rare Complication. Joseph McFarland.
89 Arboreal Traits in the Human Foot. E. H. Bradford.

Annals of Gynecology and Pediatry (Boston), May.

90 Report of a Case of Subcutaneous Emphysema Due to Tracheal Ulceration—Probably Diphtheritic. J. Gurney Taylor.

American Journal of Obstetries (N. Y.), May.

91 On the Etiology, Histology, and Usual Course of Ectopic Gestation. (To be continued.) Samuel W. Bandler.
92 *A Case of Extra- and Intra-uterine Pregnancy, with Tabulated Record of Eighty-eight Cases. E. Gustav Zinke.
93 *Some Remarks as to Why Vaginal Hysterectomy Should Be Done in Cases of Cancer of the Uterus in Its Early Stage. J. E. Janvrin.
94 *A New Operation for Retrodisplacement. J. M. Baldy.
95 Acquired Incomplete and Complete Prolapse of the Uterus and Vagina in Nulliparous Women. Henry D. Beyea.
96 Clinical Notes of Four Cases of Severe Puerperal Toxemia Treated by Accouchement Forcé. James F. McCone.
97 Two Hysterectomies for Fibroid Tumor with Marked Anemia. John H. Girvin.
98 The Undeveloped Uterus. C. L. Bonifield.
99 A Report of Gynecologic Pathology. William H. Weir.
100 Lipoma of the Vulva. Churchill Carmalt.

Toledo Medical and Surgical Reporter, May.

101 Medical Treatment of Appendicitis. O. Hasencamp.
102 Appendicitis and Its Surgical Treatment. William J. Gillette.
103 A Plea for More Intimate Relation Between Physician and Dentist. Wm. A. Dickey.
104 The Treatment of Pneumonia in Children. Wm. Henry Robertson.

Archives of Pediatrics (N. Y.), May.

105 The Progressive Principle in Rational Infant Feeding. Henry L. Coit.
106 *The Feeding of Children During Their Second Year. Thomas S. Southworth.
107 Spindle-Cell Sarcoma of the Thorax in a Child. Louis Fischer.
108 A Case of Primary Intestinal Tuberculosis. M. Nicoll, Jr.
109 Diphtheria of the Conjunctiva Treated by Antitoxin. L. Emmett Holt.
110 Clinical Lecture: Enlarged Thymus Gland, etc. Augustus Caillé.

Medical Summary (Philadelphia), May.

111 Obstructions of the Alimentary Canal. J. L. Wolfe.
112 Facial Hirsuties. W. Ashton Kennedy.
113 The Modern Treatment of Extra-uterine Pregnancy. H. Wm. Wormley.
114 When the Operation Should be Performed in Appendicitis. Thomas H. Manley.
115 Sulphate of Quinin. J. F. Griffin.
116 Reflections of a Physician. A. Toepfer.
117 Echinacea Angustifolia. E. N. Ritter.
118 Impotency, with Theory, Comments and Cases. J. J. Caldwell.

Occidental Medical Times (San Francisco), May.

119 Address, Medical Society of the State of California. W. J. G. Dawson.
120 *Some Remarks on Appendicitis. Charles Miner Cooper.
121 Recollections of the European Clinic. James T. Watkins.
122 La Grippe. W. B. Parsons.
123 Milk Production Under Hygienic Conditions. Archibald R. Ward.

124 Spinal Anesthesia, with Tropacocain in Genito-Urinary Surgery. M. Krotoszyner.
125 Errors of Refraction as a Cause of Eye Diseases. W. A. Martin.

Medical Bulletin (Philadelphia), May.

126 Alopecia Circumscripta. John V. Shoemaker.
127 Herniotomy (Girl 12 Years Old); Suprapubic Cystotomy (Female). William L. Rodman.
128 Mitral Incompetency—Mitral Stenosis Associated with Mitral and Tricuspid Incompetency—Mitral Regurgitation Due to Fibroid Myocarditis. J. M. Anders.
129 How to Study Sick Children—Difficulties of the Subject—How Books Help the Young Physician—Taking Cases—Diffuse Eczema Due to Irregular Feeding. W. C. Hollopeter.

St. Louis Courier of Medicine, May.

130 *The Modern Pharmacology of Iron. John Aulde.
131 Valvular Lesions of the Heart. L. Rassieur and Louis H. Behrens.
132 Influenza: Especially in Infants and Children. W. L. Johnson.
133 Some Clinical Characteristics of Erysipelas. Philip B. Newcomb.

Woman's Medical Journal (Toledo), April.

134 Intestinal Obstruction. Mary D. Ardery.
135 Case of Twin Pregnancy. Rose M. Blakelidge.
136 The History of Medical Education of Women in Russia. Z. Okunkova-Goldinger.

Maryland Medical Journal (Baltimore), May.

137 Suggestions Concerning Medical History. David Hunt.
138 *A Consideration of the Bottini Operation for Enlargement of the Prostate, with Report of Some Cases. (Continued.) George Walker.

The Laryngoscope (St. Louis), April.

139 *Sources of Error in Functional Tests of Hearing. Albert H. Andrews.
140 An Unusual Case of Hyperplasia of the Nasal Mucous Membrane. Charles A. Todd.
141 Secondary Hemorrhage on the Fifth Day After Tonsillotomy. Lee Weber.

Medical Mirror (St. Louis), April.

142 Artificial Infant-Feeding. William E. Fitch.
143 *Neglected, but Valuable Therapeutic Measures. George F. Butler.
144 The Trained Nurse a "Lifter," Not a "Leaner." I. N. Love.
145 Chronic Pulmonary Tuberculosis. N. O. Sexton.

Kansas City Medical Index-Lancet, May.

146 *Gonorrhea in the Female. Byron Robinson.
147 Septic Metritis. H. C. Crowell.
148 *Gastro-jejunostomy—Postmortem Six Years Later. A. H. Cordier.
149 Eye-strain as a Cause of Gastro-intestinal Neuroses. Geo. N. Thomas.
150 Report of Case of Tumor of the Female Breast. Herman E. Pearse.

American Medical Compend (Toledo), May.

151 *Tuberculosis—Some Means of Preventing Its Dissemination. Wm. A. Dickey.
152 Pleuritic Effusions. H. E. Smead.
153 Are We Undergoing a Process of Therapeutic Agnosticism? A. J. Girardot.
154 Hygienics of the Schoolroom. Mary E. Law.
155 Gonorrheal Rheumatism. J. Douglas Westervelt.
156 Septicemia and Pyemia Following Criminal Abortion. J. L. Watson.

Atlanta Journal-Record of Medicine, May.

157 A Symposium on the Pathology and the Treatment of Typhoid Fever, with Special Reference to the So-called Antiseptic, Eliminative, Abortive, or Woodbridge Treatment. James B. Baird.
158 The Diagnostic Importance of the Leukocytes in the Blood. J. M. Thomas.
159 Syphilitic Dementia—Report of a Case. Jas. B. Dillard.
160 A Splenectomy, with Remarks. Jno. G. Earnest.
161 A Frequent Serious and Unrecorded Complication of Typhoid Fever. W. D. Hoyt.

Proceedings of the Pathological Society of Philadelphia, April.

162 *The Lesions in a Series of Eyes Which Produced Various Types of So-called Sympathetic Disturbance in the Fellow Eye. G. E. de Schweinitz and E. A. Shumway.
163 *Diagnosis by Means of the Formed Elements of the Blood. C. Y. White.
164 The Function of the Soluble Ferments of the Blood in Intracellular Digestion. Alfred C. Croftan.
165 A Preliminary Report on Microbacilli in the Sebaceous Glands of the Nose, with Demonstration of the Alleged Germ of Seborrhea and Baldness. Jay J. Schamberg.
166 A Renal Calculus Composed of Calcium Oxalate, Calcium Carbonate, and Magnesium Phosphate. David Riesman.
167 Large Ovarian Cyst. M. H. Fussell and Thompson Schell.

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3. **Bright's Disease.**—The question of the surgical treatment of Bright's disease is discussed by Guiteras, who reviews the literature, more especially the recent article of Edebohls, and concludes: 1. That nephropexy is a beneficial procedure in a movable kidney in a patient suffering from chronic nephritis; 2, that nephrotomy has proved valuable in unilateral chronic nephritis associated with hematuria and nephralgia; and 3, that the value of a complete decapsulation of the kidney as a therapeutic measure in chronic Bright's disease has not as yet been determined.

6. **Hematoporphyrinuria.**—In this case, reported by Tyson and Croftan, which was due to the excessive use of sulphonal, about one-seventeenth of the hemoglobin in the body was destroyed and wasted in the urine during twenty-four hours, in the form of hematoporphyrin. We can understand how such a loss of blood pigment sustained for a prolonged period must necessarily lead to severe anemia, but in this case, fortunately, the sulphonal was stopped in good time for blood regeneration to occur.

10. **Lachrymal Reflex.**—Spiller calls attention to this reflex which consists in the secretion of tears produced by irritation. The preservation of the tear reflex in the conjunctiva in hysteric anesthesia has been observed by others, and he reports two cases where it may have been of assistance in the diagnosis.

11. **The Vermiform Appendix as a Gland.**—Killbourn points out certain anatomic and physiologic reasons for suspecting the glandular action of the vermiform appendix, both in its normal and pathologic condition, and suggests that it should perhaps be considered as of some little importance in the economy.

14.—See abstract in THE JOURNAL of February 1, p. 472.

15. **Frequency of General Paresis.**—Wagner gives a considerable portion of his paper to a review of the literature in regard to the increase in the frequency of paresis and concludes that general paresis forms about 8.75 per cent. of all cases of insanity; that it occurs most frequently between the ages of thirty and fifty; that it is gradually increasing in frequency at the present time; that men are about seven times as liable to the disease as women; that it is invariably fatal in its termination, usually so in less than two and a half years; that it is nearly twice as frequent in large cities as in the country, that heredity, syphilitic infection and alcoholic indulgence are important factors in its production; that neither the members of the learned profession, teachers, students, musicians nor actors, appear to be especially susceptible, nor does intellectual work or any other special kind of occupation seem to predispose the individual to paresis, but that general cerebral strain with more or less hereditary influence is found to have existed in the majority of cases. Overwork, sexual excesses, alcoholism, irregular habits of sleeping and eating and such accidents as sunstroke and cerebral traumatism appear to be the great factors in the production of this disease. From all his study of records he has found but a single instance of alleged recovery from the disease.

19. **Weighted Vaginal Speculum.**—Griffith reports a case in which the use of the weighted vaginal speculum seemed to have produced a sloughing, and he calls attention to the importance of warning against the use of such weighted instruments for any length of time in cases in which pressure opens the way for the assaults of infection.

22. **Stab Wounds of the Abdomen.**—From a review of the cases here reported Bissell considers the following conclusions warranted: A stab wound involving the peritoneal cavity is frequently followed by recovery without operation. In every case the wound, and the field near it, should be thoroughly antisepticized and kept so; an examination should be made with the cleansed fingers, if at all, and only to determine whether the wound penetrates the abdomen, and to ascertain if any injury has been done to the contents. If doubt exists about involvement of the organs it is better to bring the divided edge of the peritoneum into the wound, fasten it there, drain and wait. If the abdominal visceræ have certainly escaped damage, the wound should be closed by suturing the peritoneum, the muscles, and the skin and fascia in three different layers, catgut being used; or if the wound be long and gaps, a catgut running suture may be used for the peritoneum and silkworm in one layer for the skin and muscles. If there be grave doubt and the symptoms point to damage in the peritoneal cavity, the wound must be enlarged and a complete ex-

ploration made carefully; or, better still, a median laparotomy may be done exactly as in an examination of tumors of the abdominal cavity. The contents of this cavity should be examined, repaired, if necessary, and returned, and the opening then sutured as before advised; or, if the damage be too severe, the injured gut or omentum should be brought to the wound and a drain inserted, in order that an exit may be given for a fecal fistula, if that misfortune happen. This last technic is similar to an operation for appendicular abscess or suppurative appendicitis. If the gut is cut across, it must be united in any one of the usual ways. If the omentum is cut off from its intestine, so much of the intestine as is deprived of its blood supply must be resected. If symptoms of internal hemorrhage are present and increasing the indication is imperative to open the abdomen, find the origin of the bleeding and control it.

23. **Pneumonia.**—According to Tuthill the most rational mode of treatment of pneumonia would be to employ internal antiseptics, which, upon being brought into contact with the bacilli through the medium of the blood, may be enabled either to destroy them or at least to embarrass their growth and development and check the influence of their poisons. He has had very good results with salol given in the first stage; 10 gr. every two hours in adults seemed to work well, widening the intervals as the symptoms subsided. Several cases are reported.

24. **Sequelae of Measles.**—Rupp reviews the clinical sequelæ of measles, such as stomatitis, gangrene, diphtheria, lung disorders, cholitis, intestinal catarrh, gangrene of the genitals, rheumatic disorders, tuberculous glandular enlargement, nervous disturbances, etc., and finds the serous membranes rarely affected and the endocardium and pericardium still more rarely. There seems little in the way of blood changes so far as known. In mild cases, according to Cabot, no changes occur, but in the toxic attack of measles it is sometimes affected, losing at least some of its coagulability.

27. **The Cargile Membrane.**—Morris has received from Dr. Cargile, of Bentonville, Ark., a package of what he called "sterilized animal membrane" consisting of a peculiar thin gold-beater's skin subjected to heat-cumol sterilization, prepared in the form of a folded sheet in a sealed paper package. He has employed it in certain cases with advantage, but he gives here the details of experiments on rabbits. In only one was there any suppuration, and there it was intended that it should occur. He says it resisted absorption in the peritoneal cavity for more than ten and less than thirty days. Its presence apparently causes the formation of temporary loose adhesions, which are harmless, and which become absorbed for the most part in less than thirty days. The membrane seems to cause very little disturbance to the peritoneum, it does not furnish a good culture medium for bacteria, and it protects areas of peritoneal surface that have suffered injury to their endothelial covering, until new endothelial cells have repaired the injury without involving neighboring peritoneum. It is not necessary to suture the membrane in place, as it becomes instantly adherent to moist surfaces, and is not readily dislodged afterward. In this connection it may be well to give warning against handling the material with wet hands or instruments. In addition to the experiments in the peritoneal cavity, he has applied the membrane for a variety of purposes in wound treatment. As an animal membrane it seems to be particularly agreeable to the tissues of open wounds. It serves as an excellent conductor of epithelium when placed next the wound beneath absorbent dressings. It is not impervious to moisture, and in that regard possesses advantages over gutta-percha tissue or silver foil. In brain surgery the membrane adheres closely to exposed brain tissue, and it makes a very good dura mater for temporary purposes. It can be used to keep severed and sutured tendons from uniting en masse. He has had no opportunity to employ the Cargile membrane in plastic eye surgery, as few of these cases get to his clinics, but from our knowledge of the value of this material as a conductor of epithelium and of endothelium it would seem to offer advantages in this special field.

29. **Amaurosis.**—Derby relates a number of cases of optic nerve atrophy treated with strychnia injections in gradually increasing doses, and in about 30 per cent. with fairly encouraging results. He thinks the following conclusions are justified: 1. Strychnia is a stimulant to the optic nerve. Even in normal eyes it slightly increases the acuteness of vision and widens the visual field. These effects are temporary (Fuchs). 2. In certain cases of optic nerve atrophy its local subcutaneous injection has, to say the least, coincided with an arrest in the progress of the disease, and has been followed by a somewhat increased acuteness of vision. Whether these effects are temporary or permanent, time and fuller statistics will show. 3. In a progressive case of this disease it is clearly our duty to state the above facts to the patient, and allow him to take the treatment if he is so inclined. 4. The strychnia should always be administered in the temple, and by subcutaneous injection.

30. **Ear Disease and Life Insurance.**—The importance of ear disease in connection with life insurance examination is insisted on by Hammond, who maintains that we should not consider the patient's statements or recollections, because it may happen that suppuration has occurred in early infancy and has been forgotten or the patient may have become so accustomed to it as not to consider it a diseased condition or inconvenience. The examiner should always be on the alert. He points out that consumption may sometimes be detected by the clinical appearances in the ear, and he insists on the importance of not considering merely the chronic cases. Among the things we may put on our dangerous list are suspicious nodules or tumors of the auricle in elderly persons and ulcerated areas which may be due to breaking down of an epithelioma. Another point which seldom receives attention is the liability of persons suffering from partial deafness to accident. Vertigo may depend on various conditions, but it may favor accidents and should be a cause for careful examination. Many cases of otorrhea are easily cured, and this fact should also be considered. The prognosis is improved in late years. We should consider the rights of the applicants as well as those of the company we are safeguarding.

33. **The Future of Obstetrics.**—Hirst thinks that gynecology as a specialty is likely to wane with advances in obstetrics. The number of cases especially calling for it will lessen and the general surgeon will encroach more and more on its field. A feature of importance will be for the expert obstetrician to confine himself to such cases as promise to be unusually difficult or complicated and make his daily work the diagnosis and treatment of diseases of women, almost all of which must be studied in their relation to parturition. This is the actual condition on the continent of Europe and it must be the outcome of the shifting of work at present observable in America. The future trained nurse, he thinks, will be competent to take charge of the average labor case, the physician being only called in to repair the injuries of childbirth, or deal with any complications or abnormalities that may arise and make the daily routine visit, and above all to make the careful final examination at the end of the puerperal convalescence. By this plan the specialist and the general practitioner, too, could undertake the supervision of an almost unlimited number of cases.

34. **Uterine Prolapse.**— Beyea reports a case of prolapse of the uterus in a nulliparous woman and has collected a number of cases in the literature. The only conclusion to be gained is that commonly its subjective etiology is chiefly dependent: 1, on poor health, physical weakness and general tissue relaxation; 2, frequently on want of development of the uterus and its supports. The exciting causes are the diseases, laborious occupations and great physical effort which actively increase the abdominal pressure. The treatment naturally consists of attention to the general health and the performance of such plastic and abdominal operations as will restore the equilibrium.

36.—See abstract in THE JOURNAL of February 8, p. 412.

43. **Work in Hysteria and Neurasthenia.**—The value of employment in the treatment of hysteria and neurasthenia is dwelt upon by Schwab, who quotes from Monnier, also giving

his conclusions. By means of manual work, hysteria and neurasthenia can often be made to completely disappear. In cases of mental enfeeblement, psychopaths and alcoholics, the influence of work is often very remarkable. Hypochondriacs and paranoiacs are not specially benefited. A valuable point is the impulse which it gives to the acquirement of some definite work which may afterwards be made self-supporting.

52. **Ankle-Clonus.**—Mitchell has recently noticed the fact that in ordinary ankle-clonus the soleus alone is active, though the gastrocnemius is frequently mentioned in text-books as being also active. He points out that this can be readily shown by the perceptibly inactive condition of the gastrocnemium in flexion of the leg and the actual contraction of the soleus during the process. He explains the peculiarity by the fact that the soleus and gastrocnemius have rather distinct functions, the gastrocnemius being relaxed and inactive during the process, while the soleus is still capable of extending the foot. For all the slighter acts of extension the soleus alone is used.

53. **Two Unusual Forms of Clonus.**—Mitchell describes two types of clonus which are apparently new, viz., the lateral clonus movement of the ankle entirely in one plane and the toe clonus. Both were observed in a case of disseminated sclerosis under his charge. Theoretically, any muscle may exhibit the phenomenon, which is only a rapidly renewed contraction induced by sudden overstretching, but the ankle and wrist clonus are the only forms of this reflex that are of diagnostic value and they are not always pathogenic signs.

55. **Primary Degeneration of the Pyramidal Tracts.**—Spiller reports the case of a woman 50 years of age having a sudden weakness in the left arm, with loss of speech. The latter was partially regained in a day or two, and the weakness almost entirely disappeared after a few weeks. Two years after this attack she noticed that she was weak in the legs, and this gradually increased until it made walking difficult. All the reflexes were exaggerated; the Babinski reflex was obtained. The gait was not decidedly spastic. The right arm was not distinctly paretic, but the left was a little weak. There were no special sensory disturbances. The reaction of the irides was sluggish. The left side of the face was slightly paretic, but the right was probably also abnormal. At the autopsy the degeneration of the pyramidal tract was found extending as high as the pons, but not above this and less intense in the anterior pyramids than in the spinal cord, and was equal on the two sides of the cord. The other tracts were normal. There was no meningitis present. Some of the smaller vessels of the cerebral pia were thickened, which was not remarkable at her age. The cell-bodies of the anterior horns of the cord were in part diseased, and the nuclei of the hypoglossal nerves were probably not normal. A number of features of the case are discussed as peculiar and hard to explain. The author points out its differences from the ordinary amyotrophic lateral sclerosis, which he is inclined to think is less rare than supposed. He has found by the method of Marchi that the ascending frontal convolution is more degenerated in cases of this disease than the ascending parietal, which is interesting as compared with the results obtained by Schaffer in his study of brains from cases of paretic dementia. These studies seem to show that the motor functions are represented in the ascending-frontal convolution much more than in the ascending parietal one.

64. **Thoracic Injuries.**—After reporting cases of rupture and of penetrating wounds of the lung, Le Boutillier discusses the conditions, reviewing the opinions of others, and concludes that operative interference in thoracic injuries involving the lung is not only justifiable, but imperative: 1. In distending pneumothorax from whatever cause. If aspiration or the introduction of a trochar does not give relief, thoracotomy should be done and the lesions thus ascertained treated in appropriate ways. 2. In large hemathorax in cases of fractured ribs, contusions of the thorax without external wound and penetrating wounds of the thorax without regard to the nature of the weapon producing the injury. 3. In extensive and progressive subcutaneous emphysema after thoracic injuries. The nature and extent of the measures to be resorted to must be determined according to the needs of the particular case. Exploratory operations may be proper in order to determine whether wounds in the lower part of the thorax have penetrated the diaphragm or peritoneum, or to satisfy one's self as to the integrity of the heart or pericardium as well as of the internal mammary or intercostal arteries; or to provide proper drainage in wounds where infection is suspected. Delorme pointed out that in penetrating wounds with pneumothorax or hemothorax the fear of causing collapse of the lung is baseless, as the collapse has already occurred. We have at hand valuable and trustworthy means of combating shock and loss of blood in the intravenous or subcutaneous injection of hot salt solution. Oxygen inhalations and strychnin are also of great value in improving the circulation and respiration. The surgeon who hesitates to open the pleura in traumatic cases for fear that he may infect should promptly improve his methods. He who can open the peritoneum or meninges safely need have no fear of infecting the pleura.

66.—See abstract in THE JOURNAL of January 4, p. 52.

69. **Hour-Glass Stomach.**—Elder reports a case of hour-glass stomach relieved by the performance of gastroplasty, by making an incision on the anterior surface of the stomach extending from the center of each half of the hour-glass through the fibrous central ring. As the mucosa looked healthy the edges of the incision were sewed up in a direction at right angles to the primary line of incision, leaving a fairly normal looking stomach and an opening that would admit three or four fingers at ease. The results were in every way satisfactory. He remarks that the case is very similar to one published by Childe in which a gastro-enterostomy was performed, but failed to give relief, and the true condition was found at autopsy. He believes that we should make in all cases a very careful examination of the stomach before performing gastro-enterostomy and that gastroplasty, where possible, is decidedly preferable in cases of non-malignant hour-glass stomach. All the literature points to cicatricial contraction following gastric ulcer as the cause of the condition, this contraction being in the stomach wall itself or the result of adhesion to the neighboring parts with subsequent stretching of adhesive bands and the contraction of the viscus.

73. **Trephining.**—Aldrich reports two cases of trephining for intracranial disease, one cured and the other markedly benefited, though in neither was a lesion found nor were the operations made over areas which the symptoms suggested might be diseased. He remarks on the puzzling nature of the case, and concludes that the trephining operation probably produces two distinct effects: 1. Relief from intracranial pressure, 2, a marked psychic effect. While it is unsafe to advise the trephine for some cases, nevertheless in those presenting evidence of cerebellar pressure, fulness of the head, headache, dizziness, staggering gait, etc., the trephine, without opening the membrane, may be of possible service.

74. **Spina Bifida.**—The following are Knott's conclusions: 1. Owing to the distressing nature of the affliction, the high mortality should not prevent attempts at surgical relief. 2. Meningoceles, meningomyeloceles, and syringomyeloceles may be considerably benefited by operation. 3. The improvement in function can not with certainty be estimated before operation, and pronounced evidences of nervous disturbance are not a contraindication to excision. 4. Asepsis is absolutely essential, and, though difficult to secure, may be maintained by exercising extreme care. 5. The plan of having the suture lines of the meninges and the overlying tissues on different planes will, in the majority of instances, prevent leakage of cerebro-spinal fluid. 6. The suggestion of Pearson, to prevent the escape of this fluid during a prolonged operation by stuffing the canal with gauze, is valuable. 7. Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods. 8. It is not necessary to keep the child off his back during the healing of the wound, as frequently advised. 9. Children with hydrocephalus accompanying spina bifida should not be subjected to operation.

79. **Plimmer's Bodies.**—Le Count concludes that there is an analogy between Plimmer's bodies in cancer cells and certain structures in the cytoplasm of normal cells and that we should require advocates of the theory that they are essential to cancer to exclude or account for the centrosome and the enveloping variously named formations of the archoplasm in carcinoma cells.

83. **Food Intoxication.**—Ohlmacher reports cases of an epidemic which occurred at the Ohio Hospital for Epileptics at Gallipolis in which 218 patients became acutely ill with symptoms of food intoxication and gastro-intestinal infection. The diagnosis being made by exclusion, the infected food was found to be a certain batch of oatmeal which had been contaminated by the dust of a ceiling from which a section of plaster had been removed. The ceiling had been exposed to the dust from the dusty road which had lodged on the moist ceiling. Living bacteria were found, among them Bacillus coli communis and the Proteus vulgaris. These were considered to account for the condition. Experimental evidence in favor of the theory is adduced.

88. **Tetanus and Vaccination.**—McFarland reviews the subject and holds that tetanus bacilli can infect vaccine virus through the manure and hay of stables and greater care is required in the preparation to avoid the complication of tetanus.

92. **Extra- and Intra-Uterine Pregnancy.**—Zinke first reports a case of extrauterine pregnancy coincident with a normal pregnancy. Celiotomy was performed, the uterine pregnancy was uninterrupted and labor occurred at term. He discusses the various questions suggested by such cases, the occurrence of the two conceptions which in this case he thinks were simultaneous, the cause and time of death of the ovum, the difficulties of diagnosis and the frequency, cause and duration of these conditions and their treatment. He thinks it one of the rarest complications of pregnancy and no pathologic conditions should be held responsible for it. The duration varies. Generally both pregnancies are interrupted, but cases are reported where both ova grew and developed at the end of term and both children were born alive, one by operation and the other in the natural way. The prognosis is grave for both the mother and the child. The treatment is plainly indicated by the course and duration of each case. If rupture occurs, prompt celiotomy is necessary. He analyzes 88 cases found in the literature and gives a tabulated statement of the same.

93. **Vaginal Hysterectomy in Uterine Cancer.**—The object of Janvrin's paper is to put himself on record as a decided advocate of vaginal hysterectomy in cancer of the uterus in its early stages, including also some cases of adenoma and carcinoma of the uterine body and to express his conviction that we can cure a good percentage of cases so complicated. Further, he places himself on record as an advocate of either vaginal or abdomino-vaginal hysterectomy in many other still more advanced cases where operation can generally prolong life and make it more endurable.

94. **Retrodisplacement.**—Baldy offers the following method as an improvement on Webster's operation, which is in many respects more satisfactory than any heretofore offered. "The round ligament on each side of the uterus is picked up and a ligature thrown about it close to the uterus, so placed as to secure the artery. The round ligaments are then severed close to the ligatures. This leaves the uterine ends of the ligaments ligated and the other ends free and bleeding. The bleeding is controlled by a fine ligature to each vessel or by the sutures which fasten them in the next step of the operation. A pair of forceps is now made to perforate the broad ligament from its posterior aspect (at the point at which the round ligament is cut on the anterior surface), and the cut end (the pelvic end) of the round ligament is grasped in the bite of the forceps and pulled through the hole in the broad ligament (made by forceps in perforating) until it protrudes on the posterior side of the broad ligament. The opposite side is treated in a similar manner. The cut ends of the round ligaments are now attached by means of sutures on the cornua of the uterus on the posterior aspect of the uterus directly back of the original point of attachment of the normally attached round ligament. The point of attachment may be higher or lower than this, as the surgeon may find necessary to accomplish the result. If necessary as much of the round ligament is cut off, before suturing it to the uterus, as is necessary to take up any slack and give the proper amount of tension and support to the uterus. This ends the operation. The suture is a continuous one and may be either chromicized gut or silk. The effect of this procedure is to draw the fundus of the uterus upward and forward into a perfect position. The uterus remains a pelvic organ. It has no artificial supports. It is also free to expand in pregnancy as it was originally, with no greater danger of the tearing away of its supports. There are no adhesions to give future trouble from pain or possible strangulation of the bowels." He says there is absolutely no tension after this operation and, therefore, no danger of pregnancy or anything else destroying the operation or of an abortion occurring.

106. **The Feeding of Children.**—The dangers in the dietetic management of children during the second year are under-feeding and over-feeding. Too abundant and unsuitable food may produce the same effect as under-feeding. We should, therefore, try to supply the proper material. Weaning should be done, if possible, in the cooler months, but if it is necessary to have it done in the warm period it should be gradual. Southworth mentions the use of gruels and advises against the abandonment of the nursing bottle too early as it is available for feeding at all times, which is often of advantage, and insists on the importance of milk as an article of diet throughout the second year. He suggests the following arrangement of the bill of fare: 7:30 a. m., breakfast, including bottle of milk (diluted if necessary); 11 a. m., bottle of milk, with cream or zweibach; 2 p. m., dinner, with rather less milk as the other food is increased; 6 p. m., supper, including bottle of milk; 10 p. m., bottle of milk. Eggs, soft-boiled, may be given early near the beginning of the year, and dry white bread may be allowed if the teeth are good. The use of the teeth on a hard crust is doubtless beneficial as favoring salivary secretion. Fruit juices are also to be allowed. Thoroughly soft baked apple, entirely freed from the skin and hard portions of the core, is permissible, and in the middle of the year vegetables may be tried, such as spinach, carefully passed through a sieve, afterward fresh green peas, asparagus tips or tender string beans when obtainable, which may be treated in the same way. Toward the end of the year stewed celery and tender boiled onions may be added. Potato when given should be baked and mealy and well broken up with the fork. Meat in its usual form must await the development of the masticatory power, but beef juice expressed from lightly-cooked steak may be given even before the twelfth month. The finely minced white meat of poultry may also be given about the middle of the second year, scraped rare pulp of steak, roast beef, roast mutton or mutton chop, the tough fiber being carefully avoided, can be given as early as the second year. An excess of meat and its derivatives should be avoided, and the amount should bear some relation to the amount of exercise and out-of-door life. He speaks strongly against taking children to the table too early, as they see things they want and are likely to get them, to their disadvantage. Desserts are better left alone by children; they consume too much of their attention, and sweets are inadvisable.

120. **Appendicitis.**—From a general review of the subject of appendicitis and its frequency Cooper concludes that it is apparently much more common in America than in Great Britain. He speaks favorable of Ochsner's method of treatment as having undoubted efficacy in certain cases and lays stress on the following facts: Many persons have a chronic pathologic condition of the appendix from whom no history of an acute attack, either initiatory or during the course of a chronic trouble, can be obtained. A big percentage of patients present the phenomena of finger-tip-pressure tenderness at McBurney's point, consequently finger-tip-pressure tenderness is no true index of the onset of a new appendiceal trouble.

must be a recognized condition, unless its previous absence be known, in an attempt to diagnose doubtful abdominal conditions. Such patients do not present localized rigidity, even in those cases in which the diseased appendix can be rolled under the finger. He calls attention to the efficacy of local treatment during the convalescent stage of acute appendicitis helping to clear up inflammatory products around the appendix as in other regions of the body.

130. **Iron.**—The action of iron is fairly thoroughly treated by Aulde. It is absorbed very slowly by the stomach. The greater portion is probably excreted by the bowel with the production of more or less headache due to the direct action of the iron on the cerebral center or reflexly from the effect on the intestinal tract. Introduced directly into the circulation, non-coagulating salts of iron cause paralysis of the central nervous system and of the vasomotor nerves, loss of voluntary motion, enormous fall of blood pressure and death. Its toxic action may be avoided by the administration of small doses, making its action a gentle stimulant instead of a toxic irritant. The author specially notes the action of the combination of iron with zinc and enumerates the principal clinical application of iron as follows: "As a hematinic, iron must be recognized as a superior remedy and with suitable collateral or alternate medication much will be accomplished by its employment, provided that it be given in small doses so that the degree of irritation shall not exceed that of gentle stimulation. It may be used in nearly all cases where impaired nutrition is the dominant factor. The addition of nuclein from animal sources is recommended in acute as well as chronic cases of blood dyscrasia as a means of restoring and maintaining a normally antiseptic condition of the body fluids, thus favoring cell activity. This is especially to be commended in the case of catarrh affecting the mucous surfaces, since it serves to complement nature's efforts in restoring the vitality of the cellular structures, by sending an improved secretion (excretion?) to fortify and augment cell resistance. Stress is laid upon the value of the arseniate in these conditions, because of the influence of the arsenic content upon systemic metabolism. Particular attention is directed to the exceptional value of iron and zinc in combination as a protoplasmic stimulant, noting the absence of action upon the sexual function, a deficiency which may be supplied by the alternate exhibition of chlorid of gold and sodium in combination with nucleinic acid from animal sources."

138. **The Bottini Operation.**—Walker's article discusses the operation and reports cases, and he seems to think it has a decided future. He points out the alleged objections, and enumerates the following advantages: 1. It offers a greater number of cures and a less number of fatal cases than any other procedure. 2. It can be done without the use of a general anesthetic. 3. It is never attended with shock. 4. It does not require a patient to be confined to bed for a long time. 5. Its effects are in many cases immediate. 6. The accidents and complications are certainly not so serious as in other operative measures. 7. It can be done in a class of cases where the severer operative measures are contraindicated.

139. **Sources of Error in Hearing Tests.**—The possible sources of error in functional tests of hearing which must necessarily be largely suggestive and require the co-operation and correct response on the part of the patient are treated by Andrews. Some of the more frequent errors are mentioned and means of avoidance suggested. They may arise from faulty constructed or poorly-adapted instruments, failure on the part of the examiner to understand his instruments or to use them properly or from failure on the part of the patient to promptly and accurately respond to the various tests. The Galton whistle and the tuning fork stand alone as instruments for making functional examinations. There is a great variety of tuning forks on the market, most of them more or less defective. The weighted forks have an advantage of being free from overtones, but are useless for testing bone conduction because of the jar transmitted through the handle, the sensation of which the patient is liable to mistake for sound. The presence of overtones is the great objection to unweighted tuning forks, the patient sometimes answering when he only hears the overtones. A good test for overtones in a fork is to strike about the middle of the prong with some light, hard object as a pencil. The metallic ring is the overtone, and is one or more octaves above the true tone of the fork. Another objection to many of the forks is the length of time in which they continue to vibrate and a fork should be selected which the normal ear can hear only from 25 to 40 seconds. In making repeated tests in the ear in order to secure accuracy, much available time is lost while waiting for the fork to run down and the patient's attention wears out, and his replies are uncertain. It is necessary to determine how long the normal ear can hear the fork used. The amount of impairment in any given ear may be expressed by a fraction the denominator of which represents the time a normal ear hears the fork, while the numerator shows the time the impaired ear hears it. Many published records of tests are valueless because of the neglect to specify the time in which the normal ear could hear the fork. There is also a wide variation in the relative time which different forks of the same pitch can be heard by bone conduction and by air conduction in the same way. The shape of the fork, size of the handle and the temper of the steel each have an influence. We should have a standard for each individual fork not only for air conduction but bone conduction as well. In testing bone conduction, it makes a decided difference upon what part of the mastoid the handle of the fork is placed and also whether it is allowed to touch the back of the auricle. Probably the best position for the handle of the fork is directly over the mastoid antrum. The amount of pressure exerted on the handle of the fork also makes a difference. In air conduction it is a good plan to cover the patient's eyes and compel him to depend entirely upon his ears as they imagine they hear the sound if they see the fork still vibrating. Whenever there is a suspicion of accuracy the fork should be held in the hand so that the finger can be passed down along the prong of the fork, and thus gradually stop the vibrations. Sometimes the patient thinks he hears it after it has ceased to vibrate. Sometimes tinnitus so closely resembles the sound of the fork that the patient is unable to tell when he has ceased to hear the vibrations and a fork of a higher pitch should be substituted. Repeated tests should be made for the sake of accuracy. In using the high forks the patient will sometimes state that he hears when he only feels the vibrations of air set in motion by the movements of the fork. Holding the open end of the fork toward the ear will obviate this. It is necessary to keep the hair away from the ear, for if the vibrating fork comes in contact with a stray hair or two a sensation will be produced which the patient may mistake for a sound. The temperature of the instrument should also be regarded. It may be necessary to warm it to prevent any undue sensation. In the lower forks the vibration transmitted to the handle is much greater in proportion to the volume of the sound than in the higher forks. In testing bone conduction for the lower tones it would be difficult to determine whether the patient hears the fork or merely feels the jar. Andrews is not aware of any plan that will secure the desirable accurate measurement of bone conduction in the lower tones.

143.—This article appeared in THE JOURNAL of January 18, p. 155.

146. **Gonorrhea.**—Gonorrhea in the female is discussed by Byron Robinson, with details which are too elaborate to be fully reproduced. He says the treatment of gonorrhea in the female is unsatisfactory because when the microbes gain the genital mucosa they at once appropriate it as home. It wounds the mucosa and serosa, making atria for infection. It desquamates epithelia and endothelia. These atria are entered by all existing pathogenic microbes producing inflammation, which proliferates connective tissue, whose fate is cicatrices and contraction (stricture). Cicatricial contraction (the destructive results of gonorrhea) distorts the mechanism of the tractus genitalis and adjacent structures, compromising structure, function, circulation (blood and lymph), traumatizing nerve periphery, lessening nourishment and resistance. The

gonococcus, under quiet life on the mucosa, gradually becomes less virulent with cultures until it loses its virulence or the individual resistance conquers it, and that that remains is results, cicatrices. However, at the great functions of the genitals, menstruation, abortion, labor secretion (and excessive coitus and alcohol) the gonococcus partially revives its virulence from new food (due to hyperemia and consequent excessive secretion). Thus the gonococcus in the female tractus genitalis (and peritoneum) is liable to live continuous during the sexual or menstrual life from recurrent food supply producing new gonococcus cultures.

148. **Gastrojejunostomy.**—Cordier reports a case of gastrojejunostomy performed six years before, the patient finally dying of acute pneumonia and the postmortem being obtained. The Murphy button used in the gastrojejunostomy was never passed during life, but after death it was found still in the stomach and the anatomic condition of the stomach and bowel, notwithstanding that the pylorus was practically closed, was perfectly satisfactory. The presence of the button in the stomach had never given rise to a single symptom during the nearly seven years that it had remained there. He thinks this fact is in favor of its employment, considering also that it greatly shortens the time of operation.

151. **Tuberculosis.**—Dickey deprecates the exaggeration as to the contagiousness of consumption, which he thinks has been much overdone, and if such ideas were followed out they would lead to serious hardship and unnecessary legislation, which would be recognized at once as unreasonable. Tuberculosis, he says, is not a contagious disease. The contact of an individual suffering from it is practically free from danger. The tubercle bacilli being found in the sputum, as well as other secretions of the body—not in the breath—very rarely in the skin, makes it a communicable disease. If due care is taken to destroy the tuberculous expectoration and secretions as well as articles of food in which the bacilli are found, the danger of contracting the disease is practically *nil*. He points out that the building of sanatoria reduces the death rate from consumption in their immediate vicinity as shown by German experience. He does object to consumptives marrying, as he believes heredity an important factor in the causation of the disease.

162. **Sympathetic Ophthalmia.**—From the review of a number of cases, De Schweinitz and Shumway conclude that the best that can be said at the present time is that an eye, so wounded that a plastic iridocyclitis or uveitis appears, sometimes sets up in the opposite eye an analogous inflammation, to which we give the name sympathetic ophthalmitis, and that in all probability this depends upon an infection of the so-called sympathizing eye by some form of toxin which they liberate, but that sometimes exactly analogous lesions will produce only an irritation which promptly disappears on removal of the originally injured eye and disappears, moreover, without leaving a trace of organic change. It would further seem that some undiscovered, perhaps constitutional, perhaps local, condition determines on the one hand the inflammation and on the other hand the temperary so-called irritation.

163. **Blood Diagnosis.**—White knows of no disease that can be absolutely diagnosed by means of formed blood elements. Even in malaria the parasite has to be found. The only apparent exception is presented by leukemia. Splenomyelogenic leukemia, with a high percentage of leucocytes and a marked degeneration of erythrocytes are hardly to be mistaken, but lymphatic leukemia is not so certain and may closely resemble sarcoma and other diseases. That the examination of the blood is a valuable and essential part of the thorough examination of the patient does not need argument. The blood analysis should be a thorough one, but this is too often overlooked, and he calls attention to the necessity of studying the formed elements of the blood from their morphologic standpoint as well as from their count, and uses certain diseases to illustrate this fact. The complete analysis of the blood should be considered only with the results of clinical evidence, the duration of the disease and, if possible, the presence of complications. He remarks in conclusion that certain typical conditions almost invariably produce changes in the blood. These changes may be of a positive or of a negative value in the diagnosis of the disease. In some conditions the blood changes may absolutely clinch the evidence pointing to the diagnosis; in other cases, with our present knowledge, the blood offers absolutely nothing as an aid in the diagnosis. This, however, can be said of any branch of medical or surgical methods of examination of which blood examinations are only a part. In any case blood analyses, to be of any value, must be considered only in connection with the findings of other methods of examination, the history of the illness, and in the presence of complications.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below.

The Lancet (London), May 10.

1 The Seed and the Soil. W. Howship Dickinson.
2 *Embalming the Dead. J. G. Garson.
3 *The Quiescent or Latent Period in the Course of Grave Abdominal Inflammation. A. H. Tubby.
4 Some of the Surgical Aspects of Glycosuria and Diabetes (To be concluded.) Llewellyn C. P. Phillips.
5 Case of Poisoning by Morphia Injection Treated by Infusion of Salt Solution. Edward F. Willoughby.
6 *An Interesting Phenomenon Occurring in Tachycardia. Herbert D. Everington.

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7 *Surgical Treatment of Arteriovenous Aneurism. Frederick Treves.
8 *Splenic Leukemia and Phthisis Combined in the Same Patient. G. Parker.
9 The Blood in Cases Affected with Filariasis and Bilharzia Hematobia. Alfred C. Coles.
10 Case of "Infective Endocarditis" Treated with Antistreptococcus Serum. H. M. Cooper and Cyril Ogle.
11 Case of Fatal Anemia Presenting Some Unusual Blood Changes. O. K. Williamson and E. W. Martin.
12 Spontaneous Gangrene of Both Lower Limbs in a Man Aged 36. William Mitchell.
13 On Treatment of Hemophilia with Calcium Chlorid. C. Edward Wallis.
14 Notes on Cases Illustrating the Use of Adrenalin Chlorid in Ophthalmic Nasal and Aural Surgery. A. Stanley Green.

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15 On the Significance of the Term "Cure" in Medicine. James Jamieson.
16 *The Etiology of Typhoid Fever. Thomas Cherry.
17 Prostatectomy. George A. Syme.
18 Intussusception in Infants. R. Hamilton Russell.

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19 *Rats and the Plague. N. Gamaleia (Odessa).—Sur les rats et la peste.
20 New Model of Stethoscope. Troussaint (Marseilles).—Le diéchoscope.
21 Treatment of Malarial Fever with Arrhenal. A. Gautier.—Sur le traitement arrhénique des fèvres palustres.

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22 (No. 11.) Independence of Spermatogenesis and Internal Secretion of Genital Glands. Variot.—Ind. de la spermatogenèse et de la secrétion interne des glandes genitales.
23 Acute Anterior Spinal Paralysis. P. Londe.—Polynévrite avec paralysie faciale.
24 Alopecia from Eruption of Wisdom Tooth. L. Jacquet.—Pelade symétrique par éruption précoce de la dent de sagesse.
25 (Case Reports.) Cas d'hermaphroditisme. A. Petit.—Goutte aigue du pharynx. Lermoyez.—Ascite lactescente et cirrhose atrophique. Souques.—Ibid. C. Achard.
26 (No. 12.) Organic Mercurial Compounds. H. Danlos.—Sur quelques combinaisons organiques de mercure.
27 Enlargement of Heart. Dissociation of Digitalis and Couple Rhythm. P. Merklen.—Grande dilatation du coeur. Action dissociée de la digitale et rhythme couplé.
28 (Case Reports.) Compression de la moelle dorsale par un endotheliome. E. Hirtz.—Fièvre typhoide à symptomes spinaux. H. Grenet.—Erythème scarlatiniforme intermittent d'origine paludéenne.
29 (No. 14.) Spasmodic Form of Syringomyelia. G. Guillain.—La forme spasm. de la syringomyélie.
30 Polycystic Kidney in Adult. P. Menetrier.—Gros rein polykystique chez l'adulte.
31 Free Foreign Bodies in Pericardium. Duflocq.—Fibroides libres dans le péricarde.
32 *Saline Injections and Retention of Chlorids in Certain Morbid States. Ch. Achard.—Injections salines et rétention des chlorures dans certains états morbides.
33 (Case Reports.) Ascite lactescente. Cancer du colon et cancer sec. du foie atteint de cirrhose alcoolique hypertrophiante. C. Achard.—Goutte aigue du pharynx. H. Verdale.—Hystérie à début sénile. A. Souques.—Paralysie chez un garcon causée par l'usage d'une trompette à embouchure de plomb. G. Variot.—Hémiplégie protubeérantielle. Touche.
34 (No. 15.) *Cystic Affection. G. H. Lemoine.—Maladie kystique.
35 *Biliary Melanoderma. A. Gilbert.—Les mélanodermies d'origine biliare.
36 *Contagion of Vincent's Angina and Stomatitis. C. Dopter.—Contagion de l'angine et de la stomatite de Vincent.

37 *Ibid. H. Vincent.
38 Trivalve Speculum. A. Siredey.
39 *Sore Throat in Scarlet Fever. G. Variot.—Nouv. recherches clin. sur le processus angineux dans la scarlatine et sur ses irradiations.
40 *Sulphaturia and Sulphated Saline Injections. C. Achard.—Sulfaturie et injections salines sulfatées.
41 Chlorurla in Nephritis. H. Claude.—La chlorurie alimentaire expérimentale dans les néphrites.
42 (Case Reports.) Anévrisme de la portion ascendante de l'aorte. Duflocq.—Cas de mort subite dans l'appendicite. Lion.—Goutte algue du pharynx. G. Scherb.

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43 *Bloodless Treatment of Congenital Luxation of the Hip-Joint. C. Ghillini.—Le traitement non sanglant de la lux. congén. de la hanche par rapport aux difformités du femur.
44 Apparatus for Continuous Traction and for Reduction of Fractures. M. Menard.—Essais de reduction de fractures sur le cadavre à l'aide d'un appareil à traction continue et des rayons de Roentgen.
45 *Points in Treatment of Ectopia of the Testicles. P. Coudray. Traitement de l'ectopie testiculaire.
46 Dorsal Luxation of the Thumb. P. Grisel.—La luxation dorsale externe de l'articulation métacarpo-phalangienne du pouce.
47 (No. 2.) Osteotomy in Genu Valgum. P. E. Launois.—Genu valgum double invétéré. Redressement par osteotomie.
48 *"Growing" Coxa Vara. Froehlich (Nancy).—Anatomie path. et traitement de la coxa vara essentielle de croissance.
49 Precarpal Amputation. H. Morestin.—Amputation précarpienne.
50 Genu Recurvatum in Coxalgia. Phocas (Lille).
51 Incomplete Backward Luxation of the Foot. H. Judet.—Luxation incomplete du pied en arrière.
52 Tardy Rachitic Dwarf Growth. Patel (Lyons).—Cas de nanisme rachitique à forme tardive.

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53 Transformations of Quinin. A. Merkel.—Stoffwechselprodukte des Chinins.
54 Experimental Feeding with Chondroitin-Sulphate. A. Kettner.—Ueber Fütterungsversuche mit Chondroiten-Schwefelsäure.
55 Die Thätigkeit des überlebenden Säugethierherzens bei Durchströmung mit Gasen. R. Magnus.
56 Ueber Athemversuche mit einigen Giften. Hayashi (Tokio).
57 Absorption of Carbohydrates from Rectal Mucosa. F. Reach.—Ueber Resorption von Kohlehydraten von der Schleimhaut des Rectums.
58 Einige Beobachtungen an Venenpuls. D. Gerhardt.
59 Influence of Alcohol on Metabolism of Albumin During Fever. A. Ott (Oderberg).—Ueber den Einfluss des Alkohols auf den Eiweisstoffwechsel bei Fiebernden.
60 Ueber Bufonin und Bufotalin, die wirksamsten Bestandtheile des Krötenhautdrüsensecretes. E. S. Faust (Strassburg).—Ausgeführt mit Unterstützung des Elizabeth Thompson Science Fund in Boston.

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61 Die Variationen im Bau des Mesometrium und deren Einfluss auf die Entstehung von Menorrhagien und von Fluor. A. Theilhaber.
62 Zur Aetiologie der Placentarcysten. W. Vassmer (Hannover).
63 Early Interruption of Tubal Pregnancy. T. Dobbert (St. Petersburg).—60 Fälle in frühen Entwicklungsstadien unterbrochener Tubenschwangerschaften.
64 Die vaginale Anwendung der Braun'schen Blase in der Geburtshilfe. Voigt (Dresden).
65 *Ueber scheinbar primäre in Wirklichkeit metastatische Krebserkrankung der inneren Geschlechtsorgane bei Tumorbildung in Abdominalorganen. C. Römer (Breslau).
66 Metritis Hysterica. Vedeler (Christiania).
67 Eine besondere Art seniler hämorrhagischer, leukocytärer Hyperplasie der Gebärmutterschleimhaut. S. Gottschalk (Berlin).
68 Bossi's Dilator. G. Leopold (Berlin).—Ueber die schnelle Erweiterung des Muttermundes mittelst des Dilatatoriums von Bossi.

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69 *Improved Technic for Operating on Cancer of the Rectum. M. Jaffe (Posen).—Indicationen und Prognose der Operationen des Mastdarmkrebses. mit einem Beitrag zur Modification der Operationsmethoden.
70 Deformities of the Large Intestine. A. Frommer (Cracow).—Zur Casuistik der Anomalien des Dickdarmes.
71 *Sympathectomy in Exophthalmic Goiter. Balacescu (Bucharest).—Die totale und bilaterale Resection des Sympathicus cervicalis beim Morbus Basedowii.
72 Trephining in Cortical Epilepsy. W. J. Rasumowsky (Kasan).—Zur Frage der Trepanation bei corticaler Epilepsie.
73 *Extensive Resection of Intestines. E. Payr (Graz).—Ueber ausgedehnte Darmressectionen. Bemerkungen ueber chemische Peritonitis und das Stauungstransudat bei Strangulationsileus.
74 Giant-Celled Sarcoma and Plasma Cells. G. Friedlaender.—Sarcome, Riesenzellsarcome und Plasmazellen.
75 Bacterium Coli as a Pyogenic Coccus. L. de Gaetano (Naples).—Kokkenformiges B. C. mit pyogener Wirkung im Menschen und Versuchsthieren.
76 Staphylococcus as Cause of Benign Bone Neoformations. A. A. Bobroff (Moscow).—Staph. als Ursache benigner Knochenneubildungen.

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77 The Clinical Importance of the Personal Factor in Disease. Sir Dyce Duckworth (London).
78 Diabetogenic Leucomains. R. Lepine (Lyons).—Sur l'existence de leucomaines diabetogènes.
79 Coincidence of Articular Rheumatism with Typhoid Fever. P. K. Pel.—Ueber die Coincidenz von Polyarthritis rheumatica acuta mit Abdominaltyphus.
80 Cutaneous Tubercular Affections and Their Relations to Internal Organs. O. v. Petersen (St. Petersburg).—Die tuberkulösen Erkrankungen der Haut und ihre Beziehungen zu den inneren Organen.
81 *Dissociated Venous Pulse. G. Ascoli (Genoa).—Ueber ueberzahlige Venenpuls. Zur Klinik der Dissociation der Herzfunction.
82 Case Simulating Banti's Disease. E. Hocke (Prague).—Ueber ein an den Banti'schen Symptomencomplex erinnerndes Krankheitsbild wahrscheinlich hervorgerufen durch cong. Lues.
83 Experimental Study of Inhalation of Oxygen. J. Kovas (Budapest).—Exp. Beitraege ueber die Wirkung von Sauerstoffinhalationen.
84 Stroke Auscultation and Resonance, Especially for Determination of the Outlines of the Ventricles. A. Blad (Copenhagen).—Ueber Streichauscultation und Transsonanz, besonders die Bestimmung der Ventrikelgrenzen.

April 28.

85 *Anesthesin as a Local Anesthetic. C. v. Noorden (Frankfurt a. M.).—Ueber para-Amidobenzoesäure-Ester als locales Anästheticum.
86 Polyneuritis Consecutive to Malaria. A. M. Luzatto (Berlin).—Fall von Polyneuritis nach Malaria, mit Autopsie.
87 Zur Therapie der Pharyngitis granulosa und der Pharyngitis lateralis. M. Halle (Berlin).
88 *New Technic for Testing the Gastric Functions. Sahli (Berne).—Ueber ein neues Verfahren zur Untersuchung der Magenfunctionen. (Concluded from preceding number.)

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89 Lead Poisoning. A. Seeligmueller (Halle).—Zur Pathologie der chron. Bleiintoxikation.
90 *Implantation of Tendon into Bone. J. Wolff.—Ueber ostale Sehnenplastik.
91 *To See the Outline of the Stomach Without Artificial Aid. M. I. Knapp (New York).—Wie man die Magencontour ohne Hilfsmittel sehen kann.
92 Value of Iodyloform in Inguinal Lesions. G. J. Mueller.—Zur Behandlung des venerischen Geschwürs und der Lymphadenitis inguinalis.
93 Fall von extragenitaler Syphilisinfektion. Schnabel (Magdeburg).

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94 Endovenous Injections of Sublimate. A. Serafini (Padua).—Ueber die endovenösen Injectionen von Aetzsublimat.
95 Explanation of Action of Iodin in Arteriosclerosis. Jodlbauer.—Kann man eine Iodwirkung bei Arteriosklerose pharmakologisch begründen?
96 Incarceration of Uterus in Ring Pessary. G. Wiener.—Fall von Uteruseinklemmung in ein Pessar.
97 Drumstick Fingers with Atrophy of Terminal Phalanges. W. Stoeltzing (Hersfeld).—Trommelschlegelfinger mit Atrophie der Endphalangen.
98 Affections of the Pancreas and Diabetes. Teschemacher (Neuenahr).—Pankreaserkrankung und Diabetes.
99 Diagnostic Importance of Angiomata of the Skin. Rosenbaum.—Ueber die diagn. Bedeutung der Angiome der Haut.
100 Return Radial Pulse. A. Meyer (Berlin).—Rückläufiger Radialpuls.
101 *Importance of Quinin in the Treatment of Wounds. H. Marx (Lubeck).—Die Bedeutung des Chinins für die Wundbehandlung.
102 Hitherto Undescribed Localization of Lead Poisoning. G. Koster (Leipsic).—Eine bisher noch nicht beschriebene Lokalisation der Bleilähmung. (Concluded from preceding number.)

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103 Recurring Herpes of Male Urethra. Bettmann (Heidelberg).—Ueber recidivirenden Herpes der männlichen Harnröhre.
104 Escape of Hemoglobin from Corpuscles Treated with Sublimate. M. Matthes (Jena).—Ueber den Austritt des Hemoglobins aus sublimatgehärteten Blutkörperchen.
105 Importance of Slight Variations in Atmospheric Pressure for the Human Organism. O. Rosenbach (Berlin.)—Die Bedeutung kleinerer Schwankungen des atmos. Druckes für den menschlichen Organismus.
106 Dormiol in Epilepsy. J. Hoppe (Uchtspring).—Beitrag zur Behandlung des Status Epilepticus.
107 Does Emphysema of the Lungs Result from Playing Wind Instruments? H. Fischer.—Ist Lungenemphysem eine Folge des Spielens von Blaseninstrumenten?
108 Abnormal Development of Exanthem in Varicella. V. Hoesslin.—Varicellen mit abn. Entwicklung des Exanthems.
109 Lead Poisoning from Water and from Flour. Success of Atropin in Treatment of Colics. A. Weber (Alsfeld).—Seltene Ursachen der Bleivergiftung. Behandlung der Koliken mit Atropin.
110 Colloid Silver. E. Toff (Braila).—Ueber die Anwendung des Unguentum Argenti colloidalis (Credé).

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111 (Nos. 5 and 6.) Diagnostic Value of Cytoprecipitin. E. Centanni.—La citoprecipitina e su valore diagnostico.
112 (No. 7.) Blood Reaction in Pellagra. A. d'Ormea.—Reazioni del sangre pellagroso sul sangre estraneo e sul plasma dei propri tessuti.
113 (Nos. 8 to 10.) Passage of Micro-organisms Through Cutaneous Lesions. C. Dalmasso.—Sul passagio dei micro-organismi patogeni e delle loro tossine attraverso la discontinuita della cute.
114 (Nos. 11 and 12.) Myelotoxic Serum. G. Sulli.—Il siero mielotossico.
115 (No. 13.) Gold Wire and Automatic Retractors for Herniotomy. J. Tansini (Palermo).—Sulla sutura con filo d'oro e sopra alcuni nuovi strumenti per l'operazione radicale dell' ernia inguinale.
116 (Nos. 14 to 16.) Carbolic Injections in Tetanus. E. Cioffi.—

Tetano reumatico e traumatico e tetano sperimentale di fronte al metodo Baccelli.

117 (No. 17.) Origin of the Vitreous Humor. C. Addario.—Sulla matrice del vitreo nell' occhio umano e degli animali.

118 (No. 18.) Acquired, Habitual Luxation of the Patella. D. Biondi.—Lussazione esterna completa abituale della rotula, probabilmente da paralisi infantile.

119 (No. 19.) Influence of Extreme Cold on Pathogenic Germs. C. M. Belli.—Ulteriore ricerche intorno all' azione delle bassissime temperature ottenute con l'aria liquida sulla virulenza dei germi patogeni.

120 (Nos. 20 to 23.) Treatment of Complete Genital Prolapse. N. Antonio.—Contributo alla cura chirurgica del prolasso genitale completo col processo Chiarleoni.

121 (No. 24.) Perforation of the Intestine by Ascarides. S. Solieri.—Perforazione intestinale da ascaridi.

122 (No. 25.) Obliteration of the Ureter and Consecutive Cystic Degeneration of the Kidney. Ibid.—Obliterazione dell' uretere al suo sbocco in vesica e consecutiva degenerazione cistica del rene.

123 (Nos. 26 to 32.) Liver-Spleen Syndrome in Hepatic Asytolia. C. C. Alberto.—Contributo clinico allo studio della asistolia epatica nel decorso dei vizi valvolari del cuore. Della sindrome epatosplenica nella asistolia epatica.

124 (Nos. 33 to 35.) *Agglutination in Malarial Blood. D. Lomonaco.—Sul fenomeno dell' agglutinazione nel sangue dei malarici.

125 (No. 36.) Ergographic Studies on Epileptics. C. Golucci.—L'allenamento ergografico nei normali e negli epilettici.

126 (Nos. 37 and 38.) Sulle diplegie Spasmodiche infantile. Cavazzani.

127 (Nos. 39 to 42.) Su altri 5 casi di tumore cerebrali. O. d'Allocco.

128 (Nos. 43 to 46.) Infantile Gastrointestinal Toxi-Infections. L. Concetti (Rome).—Le tozzi-infezioni gastro-intestinali nei bambini.

129 (Nos. 47 to 50.) Bone Marrow and Blood in Infectious Diseases. A. Michelazzi (Pisa).—Ricerche istologiche e sperimentali sul midollo delli ossa e sul sangue nelle malattie infective.

130 (No. 51.) *Acetic Acid in Alcohol for Treatment of Wounds. L. de Gaetano (Naples).—L'alcool acidificato con acido acetico nel trattamento delle ferite riunite per prima intenzione.

131 (Nos. 52 to 54.) *Delirium in Croupal Pneumonia. A. Brancati (Catania).—Il delirio nella pneumonite crupale.

132 (Nos. 55 to 57.) *Study of the Pancreas in Relation to Tuberculosis. F. E. Italia (Roma).—Azione del bacillo tubercolare sul tessuto pancreatico e dell' infuso di pancreas sui tessuti tubercolari.

133 (Nos. 58 and 59.) Acute Atrophy of Liver. T. Carbone Modena).—Un caso di atrofia acuta del fegato.

140 (No. 60.) Complete Extirpation of Parotid Gland for Recurring Carcinoma. S. Pusateri (Palermo).—Un caso di estirpazione completa della parotide per carcinoma recidivante con diffusioni glandolari e cutanee.

141 (Nos. 61 and 62.) Variola in Fetus Without Traces of Variola in Mother. G. Jacontini (Naples).—Vaiulo fetale non secondario a vaiulo materno.

142 (Nos. 63 to 66.) Active Substances in Typhoid Cultures. Paladino-Blandini (Naples).—Ricerche sulle sostanze attive nelle tifo-culture.

143 (Nos. 67 and 68.) Study of Case of Dextrocardia. A. Lucchi (Modena).—Considerazioni sopra un caso di destrocardia congenita a forma rara.

144 (Nos. 69 to 71.) Three Cases of Sutured and Cured Wounds of Liver. V. Martinelli.—Tre casi di ferite del fegato trattate con l'intervento e guarite. Stato attuale dell'ematostasiepatica. Statistica.

145 (No. 72.) Tumor of Base of Skull. G. Muggia.—Un tumore della base del cranio.

146 (No. 73.) Fungoid Mycosis. T. Secchi.—Osservazioni istologiche su granulomi infettivi. Mycosi fungoide.

147 (II, No. 1.) Splenectomy and Talma Operation in Banti's Disease. J. Tansini (Palermo).—Splenectomia ed operazione di Talma nel morbo di Banti.

148 (No. 2.) Talma Operation. G. Doglioni.—Contributo allo studio della deviazione chirurgica del sangue della vena porta.

149 (No. 3.) Histology of Tube in Rabbits with Young. P. Fiori.—L'istologia delle trombo Falloppiane durante la gestazione dell' utero.

150 (Nos. 4 and 5.) Experimental Endovenous Injection of Sublimate. A. Serafini (Padua).—Sulle iniezioni endovenose di sublimato corrosivo.

151 (No. 6.) Syphilitic Contracture of Adductor Longus. Gravagna.—Un caso di contrattura sifilitica del musculo adductor longus.

152 (No. 7.) Study of Agglutination of Red Corpuscles. A. Capogrossi.—Contributo allo studio del potere agglutinante del siero di sangue umano sui globuli rossi.

153 (No. 8.) Kernig's Sign in Sciatica. A. Magri.—Il segno di Kernig nella sciatica.

154 (No. 9.) Experimental Injections of Sublimate. P. Spissu.—Le iniezioni endovenose di sublimato corrosivo nel carbonchio ematico.

Russkii Vratch (St. Petersburg), March and April.

155 (No. 10.) Oxidizing Ferments. N. O. Siber-Shumova.—Ob okislitelnykh fermentakh.

156 *Banti's Disease. S. Gruzdeff.—Bolyezn Banti. (Concluded from No. 8.)

157 Notes of an Urologist. M. L. Krebs.—Iz urolog. nabliudenii.

158 (No. 11.) Experimental Peritonitis. V. A. Oppel.—Exp. ostry microbny peritonit.

159 Professional Injury from Loss of One Eye. A. Maklakoff.—Praktitcheskiya dannya k vyiasneniyu voprosa o ponizhenii rabotosposobnosti u krivykh.

160 (No. 12.) Anastomosis between Nerve Cells. M. D. Lavdovsky.—Ob anastomotitcheskikh svyazyakh mezhdu nervymi klyetkami.

161 Case of Abnormal Communication between Aorta and Pulmonary Artery. V. F. Orloffsky.—K casuistikye soobshtchenii mezhdu aortoi i legotchnoi arteriei. (Concluded from No. 11.)

162 Relations between Bacilli of Human and Fowl Diphtheria. A. M. Maksutoff.—Otnoshenie palotchki diphtherii tchelovyeka k palotchkye ptitchei diphtherii.

163 (No. 13.) Study of Case of Branchial Fistula. N. A. Batueff.

164 Operative Treatment of Uterine Fibromyomata. S. D. Mikhailoff.—O chir. letchenii fibromiom matki.

165 Stab Wounds in Abdomen. B. K. Finkelstein.—O pronikayushtchik kolotoryezanykh ranakh bryushnoi polosti. (Concluded from No. 12.)

166 Application of Physical Chemistry to Balneology. A. K. Prussian.

167 (No. 14.) Contra-Indications for Intra-Uterine Injections in Case of Inflammation of the Adnexa. A. P. Gubareff.—K voprosu o letchenii vospalenii pridatkov matki vnutrimatotchnymi vpryskivaniyami.

168 Study of Case of Balantidium Infection of Large Intestine and Stomach. N. S. Solovieff.—Slutchai zarazheniya balantidiumi tolstoi kishki i zheludka.

169 Study of Hedonal. S. P. Lamosakoff.—O dieistvii hedonala na zhivotnyi organizm.

170 (No. 15.) Histo-Pathologic Modifications Observed in Lupus Under Influence of Finsen's Light Treatment.. M. S. Pilnoff.—O. pat.-ist. ismyeneniyakh pri lupus pod vliyaniem svyeto-letcheniya po sposobu Finsen'a.

171 *Involvement of the Ovaries in Epidemic Mumps. I. V. Troitzky.—K voprosu o zabolevanii yaitchnikov u dievotchek.

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172 Actinobacillosis. J. Lignières and J. Spitz (Buenos Ayres).—Actinobacillose.

173 *Occlusion of Auriculo-Ventricular Opening. J. Mendez.—Oclusion del orificio auric.-ventr. por lesion fetal.

174 Campaign Against Tuberculosis in Argentina. E. R. Coni.—La lutte contre la tuberculose dans la Republique Argentine.

175 Paresifying Flagellosis of Horses. Elmassian.—Mal de caderas.

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176 (No. 2515.) Value of Adrenalin in Rhino-Laryngology. C. Compaired (Madrid).—El cloruro de adrenalina en otorhino-laringologia.

177 *Growing Together of the Jaws. J. G. Castro (Caceres).—Yuxtaposicion permanente de los maxilares.

178 (No. 2516.) *Treatment of Detachment of the Retina by Injections of Sodium Chlorid. B. Castresana (Madrid).—Disprendimiento de la retina. Su curacion por las inyecciones de cloruro de sodio. (Commenced in No. 2513.)

179 Affections of the Digestive Apparatus. A. M. Perujo.—Enfermedades del aparato digestivo segun la topografia de los organes.

180 (No. 2517.) Electrotherapy. A. Diaz de la Quintana.—Revista de fisicoterapia.

181 (No. 2518.) Acetonuria or Aldehiduria? V. P. Cervera.

182 (No. 2520.) Medical Ethics. F. P. Maya.—Etica medica.

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2. **Embalming the Dead.**—In this article, which is not directly medical but still of interest, Garson remarks that the ancient Egyptians knew how to successfully preserve bodies, but their methods were tedious and much more complicated than modern methods. He believes that embalming is not a matter which should be left to the undertaker alone, and it should be done about twenty-four hours after death. He thinks the best preservative of blood vessels to be one of bichlorid of mercury or some similar acting salt and methylated spirit; the solution may also be used for external application and for injection in the cavities and hollow viscera. Two gr. to each ounce of injection fluid are usually best to begin with, but the strength should be somewhat increased even to double strength during the latter stages of the process. To avoid too much drying of tissues some glycerin may be added, not exceeding one-quarter of the bulk of the spirits used, usually less. Two gallons or nine liters are sufficient for the male adult and five liters for the female. To get the best results the injection should be done slowly to avoid rupturing the vessel and there should be a gauge to indicate the force with which it is entering the body, whether this is applied by pump or by fountain syringe. Further details are mentioned. In a case where the bursting of an artery in the thorax or abdominal cavity has occurred, the injection should be performed upon the ruptured vessel which must be exposed. In case of general anasarca, the dropsical condition so far as possible should be gotten rid of and the best plan is to siphon out the fluid in the abdominal cavity with an India-rubber tube, then elevating the limbs and tightly bandaging from the distal extremities upwards and press out the fluid before injection. He gives the order of working in case a postmortem is required before embalming and in case that has to be done first. If the embalming can be done first the postmortem should be delayed at least twenty-four hours after its performance.

3. **The Quiescent or Latent Period in Abdominal Inflammation.**—Tubby's paper calls attention to the quiescent or latent period which is sometimes a prominent feature in intestinal injuries, injury or bruising of the peritoneal connections of the viscera, with interference with their blood supply, acute disease of the genital organs, especially the Fallopian tubes, and acute appendicitis. He says especially in appendicitis it is a well-marked symptom. In nearly all acute stages, according to Symonds, a stage is reached soon after the onset marked by a session of all acute symptoms and the neglect of this may lead to disease. The most important information is obtained from a careful study of the pulse and temperature. The most serious cases frequently have an accelerated pulse with subnormal temperature, and, if this occurs with the history of the onset of the attack, it justifies immediate operation. If in a case of appendicitis an initial rise of temperature and pulse are followed by a fall in both, succeeded after a few days by a rise, it means the presence of a considerable amount of pus and the abscess should be evacuated. A transient or persistent rigidity and absence of all other symptoms are important, especially when signs of intestinal peristalsis are absent, as indicating a serious condition. Distension may be absent, but if it persists for longer than twenty-four or thirty-six hours and is unrelieved by treatment such as turpentine enemata it is of serious significance. If vomiting occurs after the quiescent period in spite of careful feeding and nursing, especially after the administration of sedatives, we must not underestimate the symptom. The leucocyte count also is of importance during the quiescent period. He thinks this method of clinical examination is likely to be one of great importance.

6. **Tachycardia.**—In the case reported by Everington the patient was taken with violent action of the heart in the course of apparently acute rheumatism and though there was no evidence of organic disease, the heart beats came up to 220 per minute at one time. The patient was directed to take deep breaths, and after several of these inspirations it was found that the heart beat had fallen to 124 or nearly 100 beats per minute. The fact that the mere mechanical taking of deep inspirations was sufficient to reduce the heart beat has been noticed before by Sir William Broadbent and by Rosenfeld and Allbutt, but he thinks the observation is of sufficient interest to be recorded.

7. **Arteriovenous Aneurism.**—Treves reports four cases occurring in the African war, two of varicose aneurism, and two of aneurismal varix. He remarks that the only operative measure to be commended in these cases is ligature of the vessels at the wounded site and the ideal operation would be to ligature both arteries and veins above and below the abnormality. This is not always practicable, and in one of these cases of aneurismal varix of the left groin he simply ligatured the common femoral above the lesion and the superficial femoral below, nevertheless with excellent results. He remarks that these show what satisfactory results may follow operative measures themselves far short of perfection.

8. **Splenic Leukemia in Phthisis.**—Parker reports the first case of this condition observed in Great Britain, and discusses the diagnosis. He thinks perhaps an injury received may have had some influence.

16. **Typhoid.**—In Cherry's opinion many mild cases of fever called febricula are really cases of typhoid, and may serve to distribute the contagion. Typhoid fever itself, he thinks, may be a composite disease or a series of diseases, caused by closely allied organisms. He does not think it necessary to assume a *de novo* origin, though it can not be disproven.

19. **Rats and the Plague.**—A communication received from Gamaleia based on the examination of 23,131 rats, announces that the sewer rat is seldom found on ships. Out of nearly 10,000 rats found in the center of Odessa about 95 per cent. were the sewer rat—*mus decumanus*—while 96 per cent. of 1178 rats found on vessels were of the species *mus rattus*, or the domestic rat. He also found that the three principal varieties of the latter, the black, the red and the Alexandrine rat, do not live together but inhabit different vessels. The black rats were found mostly on ships from England and the Black Sea ports, while the Alexandrines were found on Turkish and Egyptian vessels and the red species on ships from the Orient. He found that the plague among the town, or sewer rats, was strictly localized in three foci. One was the restaurant where the first patients with the plague were discovered. This focus was exterminated by the destruction of the supplies of rice, cabbages, etc., in the cellar. The second focus was a freight platform, and this focus also was exterminated after the destruction of a few bags of spoiled rice on it. The third focus is a large freight warehouse; as so many goods are stored there, it has proved impossible to destroy them all; consequently this focus still exists. The determination of these limited foci suggests that possibly the plague is not transmitted directly from one sewer rat to the other, but indirectly by the mediation of infected rice or other foodstuff. Proust commented on this communication that possibly the immunity enjoyed by Europe in respect to the plague may be due to the predominance of the sewer rat, which seems to be less susceptible to the natural plague than the other species.

32. **Saline Injections and Retention of Chlorids in Certain Morbid States.**—Achard tabulates a number of cases of various diseases in which he had injected a liter of saline solution. The results showed that the injections failed to induce diuresis. He had a similar experience with salt ingested by the mouth. He attributes the absence of diuresis to the varying retention of sodium chlorid by the tissues in different morbid states. It is retained in the dissolved form, and consequently a large amount of water is retained with it. The diuresis was not increased except in one case in which the patient had shown evidences of previous polyuria. He thinks that the general tendency is to resort too much to these injections, and that they are useless as diuretics in diseases accompanied by a retention of the chlorids. He has demonstrated that pneumonia takes the lead in this respect, but is closely followed by the majority of acute infectious diseases, attacks of asystolia, uremia, infectious icterus, etc.

34. **Cystic Affection.**—Lemoine considers polycystic degeneration of organs as the evidences of an essential affection of glandular organs, characterized by the dilatation of the acini or excreting canals under the normal pressure of the fluids which they contain. It is thus an actual glandular angioma. The tendency is probably congenital.

35. **Melanoderma of Biliary Origin.**—Gilbert attributes to the presence of bile pigments in the blood the nevi, tiny moles, freckles, dark circles around the eyes, the so-called bilious complexion and the pigmentations of pregnancy. The tendency to melanoderma may remain latent until some casual cause may incite it to activity, some mechanical or chemical factor, exposure to the sunlight, the irritation of a blister, or a medicine. These various causes do not induce the pigmentation except in those predisposed by a tendency to cholemia, and it is frequently a revealing sign of the latter.

36 and 37. **Contagion of Vincent's Angina.**—Three undeniable cases of contagion of the angina or stomatitis caused by the association of the spirillæ and the fusiform bacillus are reported. Vincent reiterates that the promptest method of cure is to rub the parts thoroughly with a tampon impregnated with tincture of iodin, removing all the false membranes.

39. **Study of Sore Throat in Scarlet Fever.**—Variot's experiences include 864 cases of scarlet fever in children under 14. He states that the angina is polymorphous, with or without exudation, and that the diphtheria bacillus can be found in it from the start in a certain proportion of cases. In others the angina may present all the characteristics of the diphtheritic sore throat but without the diphtheria bacilli. Superficial ulcerations are frequent and the influence of the throat process and its irradiations determines the gravity of the disease and the temperature curve. True nephritis was observed in only about 1 per cent. of all his cases of scarlet fever, but slight, transient albuminuria was noted in 101. He makes a practice

of keeping the children in bed and on a strict milk diet for five weeks, and attributes to these precautions the small proportion of cases of nephritis. ("Tout nos petits malades sont soumis au régime du lait exclusif pendant cinq semaines. De plus il leur est bien difficile de se refroidir, car pendant le même laps de temps ils gardent entièrement le lit.")

40. **Sulphaturia and Sulphated Saline Injections.**—Achard supplements his communication on the retention of chlorids in certain diseases, mentioned above, with the statement that the sulphates behave differently from the chlorids in this respect. There is no retention of the sulphates and they are more liable to induce diuresis.

43. **Bloodless Method of Treating Congenital Luxation of the Hip-Joint.**—Ghillini has now had an experience of 100 cases treated by his method, which he asserts is the reverse of the usual procedure. He aims to place the hip in such a position that the head of the femur rests against the place where the acetabulum normally should be. The new joint thus obtained does not resemble a normal joint anatomically, but behaves exactly like one. The functional results have been perfect. When the head of the femur is displaced upward, for example, he twists the thigh into exaggerated abduction. When the displacement is downward, he twists the thigh in adduction. For forward displacement he twists it in inward rotation, and for backward displacement in outward rotation. In case of a complex deformity, such as backward and upward displacement, he twists the thigh in outward rotation and abduction. He follows Lorenz's directions for after-treatment for six to twelve months.

45. **Points in Treatment of Ectopia of the Testicles.**—Coudray has found thyroid treatment effectual occasionally and urges trial of it in every case before resorting to other measures. Treatment should be commenced as early as the age of 2 or 3. About 5 cg. a day of thyroid extract should be given to boys under 3, and 10 cg. after this age, gradually increasing to 15 and 20 cg. If no results are apparent in the course of two or three months, this medication should be supplemented by manipulative measures for four or five minutes a day. This combination has proved very effective in his experience with retention in the inguinal region. When the testicle is below the ring and the cord can easily be stretched, a double Y bandage will be found useful. Treatment on these lines is liable to be successful under 10 or 12. After this age it may induce hernia or hydrocele. Bloody intervention is indicated only in case of failure of these measures.

48. **"Growing" Coxa Vara.**—Froehlich points out the resemblance between the coxa vara which is due to the rapid growth of the subject, and tarsalgia. Both are characterized by pain, muscular contraction, deformation of the bones and sometimes arthritis of the dry type. He has been very successful in curing the coxa vara by resection of the great trochanter and immobilization in bed for six weeks.

65. **Metastatic Cancer in Internal Genitalia.**—Römer describes the danger of mistaking a metastatic cancerous affection of the internal genital organs for a primary lesion. He urges that these organs should be carefully examined in operating on account of cancer elsewhere in the abdomen, and that they should be removed on the slightest suspicion of pathologic alteration. In performing a primary operation on these organs the abdomen should be carefully searched to discover indications of a tumor elsewhere which may in fact prove to be the primary lesion.

69. **Improved Technic for Operating on Cancer of the Rectum.**—The modification proposed by Jaffe is for the purpose of resting the intestine while it is healing. He draws the upper stump of the rectum out through an incision just below the tip of the spine, and fastens it temporarily in this artificial anus. Tissue gradually forms to connect the distal stump with the side wall of the rectum passing above it to the artificial anus. After the healing is complete, the walls of the distal stump are sutured to the side wall of the proximal stump above. When all this is healed, a hole is made in the side wall of the proximal stump between the points where it is sutured to the distal stump. The course of the fecal matters is thus diverted once more to its normal route and the artificial anus is then closed.

71. **Sympathectomy in Exophthalmic Goiter.**—Balacescu reports 17 cases of exophthalmic goiter treated by total, bilateral resection of the cervical sympathetic. The results are 10 cured; 2 cured but with recurrence since, and 5 improved. The patients have been under observation twenty days to two years. He considers it comparatively harmless, and the most effective of all operative methods of treating this disease.

73. **Extensive Resections of Intestines.**—Payr thinks that the peculiarly powerful bactericidal action of the fluid which collects in a hernia or transudate is a kind of rampart against the bacteria which pour into the peritoneal cavity in cases of ileus from strangulation and similar conditions. The exceptional bactericidal power of the collected fluids in such circumstances may explain the benefits derived from Bier's artificial active and passive congestion. Payr suggests the possibility of artificially inducing a transudate or "hernia water" as a means of combating acute and chronic inflammation in abdominal affections. He reviews 35 cases of extensive resection of the intestines. In 12, more than 200 cm. were excised. About 310 cm. of the ileum were removed in one patient who is perfectly well now after several years. In another 330 cm. were resected. A patient died immediately in collapse after resection of 365 cm., but the fatal termination in this case was not necessarily the result of the resection.

81. **Dissociated Venous Pulse.**—Ascoli has observed two cases in which the negative pulse beat was more frequent and regular than the pulse in the carotid. Study of these cases has demonstrated that the auricles and the ventricles are able to work dissociated, and that dissociation is possible between the action of the right and of the left heart. The auricle contracted more frequently than the ventricle in the cases observed. Part of the contraction starting in the auricle was arrested at the auriculo-ventricular opening ("blocked heart"). This fact suggests that the cardiac impulse originates in the auricles.

85. **New Local Anesthetic.**—Von Noorden recommends the ester of para-amido-benzoic acid—the substitute for orthoform—as a harmless and effective anesthetic, free from the irritating properties of orthoform. It is more commonly known as anesthesin, and he reports a number of cases of pruritus vulvæ, hyperesthesia of the throat, hemorrhoids, etc., in which he was agreeably surprised by its action.

88. **New Method of Testing the Gastric Functions.**—By the technic which Sahli describes it is possible to obtain more exact information in regard to the digestive functions of the stomach than has hitherto been possible. The substance he orders for the test breakfast is a gruel made of 25 gm. flour, 15 gm. butter and 350 c.c. of water, salted to taste. The subject eats with a spoon 300 c.c. of this palatable "flour soup," after his stomach has been rinsed. An hour later the contents of the stomach are siphoned out. The stomach is then rinsed again, while light massage is applied, as Mathieu advises, to bring the last scraps of the food. The gruel does not become materially altered in the stomach, and is thus peculiarly adapted for this kind of research. The acidity of the stomach contents can be determined from the siphoned out gruel. The proportion of fat in it is compared with that of the 50 c.c. kept for control. He tests for fat with the centrifugalizer and Gerber's butyrometer, which is a small instrument in current use for testing milk. The gruel contains no lactic acid, and hence it is a reliable test for the production of this acid in the stomach. It is possible by this procedure to determine the total acidity as well as an excess or deficit of acid, also the quantity and quality of the pepsin, rennet, digestion of starch, etc. The average in five healthy persons tested was 124 gm. of stomach contents siphoned out one hour after ingestion of 300 gm. of the gruel. This was made up of 72 gm. of gruel, 52 gm. of gastric juice and 3.5 per 1000 of hydrochloric acid. It proved possible by this means to diagnose, 1, excessive or deficient secretion or acidity, with or without excessive motor function; 2, normal

ecreting power with deficient acidity and hypermotility; 3, iminished motility with diminished acidity and secretion, and , diminished motility with hypersecretion and anacidity. urther experience will probably reveal new combinations of isturbed functions that can be detected by this means. Already has been established that hypersecretion and hyperacidity ay occur without primary disturbance in the motor function r stenosis of the pylorus. The facts observed also suggest the ecessity for laxatives or lavage of the stomach in the cases of mpaired motor function and for an alkali or some preparation belladonna in case the secretions need regulating, or a meat xtract or bitters to stimulate them.

90. **Implantation of Tendon into Bone.**—The late Profes- or Wolff de.ivered this address at Berlin in December. He escribed some cases in which he had cured deformities by im- lanting the sound tendon directly in the bone. A mere in- ision of the bone is enough in the case of children, but he digs groove for the tendon in a mature bone. By this transplant- g of the tendon in a new spot, extremely fine functional re- ults have been attained.

91. **To See the Outline of the Stomach without Arti- cial Aid.**—Knapp has the subject recline on the table with he abdomen exposed and breathe quietly. The physician rings his eyes on a level with the surface of the bdomen and watches the waves caused by the respira- on. He will soon recognize a fine line which glides long during inspiration and which he will establish is the rvature of the stomach. The point where this line stops uring inspiration is marked on the abdomen. The outline of e stomach thus defined is corroborated by light percussion on wo fingers held close together, but with the line between them. he sound will be different from each finger if one is inside nd one outside the limit of the stomach.

101. **Importance of Quinin in Treatment of Wounds.**— arx proclaims that a .1 or .2 per cent. solution of quinin ar- sts the growth of the pyocyaneus, staphylococcus aureus and nthrax and mesentericus bacillus. The germs that do not rm spores were killed in a 1 to 1.5 per cent. solution in thirty sixty minutes, and the anthrax and mesentericus spores in enty-four hours' exposure to a 1.5 to 2 per cent. solution. e has recently called attention to the value of quinin as a yptic. It induces agglutination and coagulation so that it able to arrest any parenchymatous hemorrhage in local ap- ications. He keeps a solution of the hydrochlorate in 3 parts rtified spirits and 100 parts water, always ready for use in perating, applying it on a tampon to the bleeding surface. uinin has also a deodorizing action, and he has never wit- ssed any untoward consequences from its local application. e is now studying its use in general septic affections, ery- pelas, phlegmons, etc. He warms the solution to body tem- erature to thoroughly dissolve the quinin. If applied very ng it induces a "coagulation necrosis," which may prove eful in some cases, but should be avoided in others.

124. **Agglutination of Red Corpuscles by Serum from alarial Subject.**—Healthy serum has no agglutinating effect the red corpuscles of healthy blood, but the serum acquires is power in disease. It is much more marked in serum from malarial subject than in any other affection. Administra- on of quinin arrests this agglutinating power and may prove luable as a differentiating measure.

130. **Acetic Acid in Alcohol for Treatment of Wounds.**— etano s tests have convinced him that a 20 per cent. alco- lic solution of acetic acid is the most efficient disinfectant at r command for the treatment of wounds.

131. **Delirium in Croupal Pneumonia.**—Brancati succeeded isolating a toxin from cultures of the pneumococcus which evidently a neurotoxin. It causes paralysis in animals and lirium in man.

132. **The Pancreas in Relation to Tuberculosis.**—Italia as able to demonstrate that an infusion of pancreas tissue jected into susceptible animals simultaneously with virulent ltures of the tubercle bacillus, prevented the infection of the animals. When injected after the animals had been inoculated with the bacilli, it cured localized tuberculosis. He believes that the pancreas contains a tuberculosis antitoxin.

156. **Banti's Disease.**—Gruzdeff describes 3 cases personally observed and concludes from them and the cases that have been published that the unconditional fatal termination without an operation imposes splenectomy as soon as the diagnosis is established. The small number of cases on record renders it difficult to define the disease exactly. We must include in it certain very rare forms of cirrhosis of the liver like two of the personal cases described. He adds that further study of Banti's disease can not fail to throw much light on cirrhosis of the liver in general.

171. **Involvement of the Ovaries in Epidemic Mumps.**— Troitzky found that the genital glands were affected by the mumps infection in 13 out of 33 little patients. The region over the ovaries was sensitive to pressure and more or less painful, and he suggests that possibly mumps may be responsible for some of the pathologic changes observed in the ovaries in later life. He recommends that this region should be investigated in girls and local measures applied at once at the slightest symptom of inflammation of the ovaries or their environment. By warding off or dispelling inflammation in the early stage we can safely guarantee that the ovaries will pass unscathed through the disease.

173. **Occlusion of Auriculo-Ventricular Opening.**—Mendez attributes the occlusion of the opening in this case to a fetal endocarditis after the parts were nearly formed. The patient was a man of 26, well developed, but always troubled with recurring symptoms of asystolia. Seven cases are on record of occlusion of this opening from lack of development, the oldest subject 10 years of age, and ten cases in which it was evidently due to a fetal endocarditis. Six were under 2 years of age, one 8, one 21, one 28, and the present case.

177. **Growing Together of the Jaws.**—Castro reports the case of a man 23 years of age whose jaws had grown inextricably together as the result of noma after measles in childhood. He was able to eat only liquid food, and this through a small opening where two canine teeth were missing. General and even local anesthesia were impossible under these conditions, and the cheeks were first detached from the jaws. When this wound had healed the interlaced teeth were pulled and the jaws pried apart, until comparative function was restored on the left side.

178. **Treatment of Detachment of the Retina by Injections of Sodium Chlorid.**—Castresana announces that injections of a concentrated solution of sodium chlorid cure detachment of the retina by the strong osmotic currents and the slight irritation with consequent adhesions which they induce. Starkle has recently reported 23 cases thus treated, resulting in 6 complete and 10 partial cures. He used a 4 to 10 per cent. solution which Castresana does not consider sufficiently powerful. He would probably have been still more successful if he had injected a saturated solution of the sodium chlorid such as Castresana recommends. He reports several patients treated in this way with the cure of all the recent cases. Detachment of long standing is incurable. In one patient the detachment had occurred four years previously in one eye and six months in the other. The first eye was not affected, but the detachment was entirely cured in the second eye with restoration of vision. He injects beneath the conjunctiva 2 gm. of a saturated solution of sodium chlorid to which two drops of acoin have been added. The injection is rather painful and causes considerable chemosis for a few hours, with irregular pulse and a tendency to vomit, but all these symptoms passed away in the course of twelve hours and the reaction was very slight to the second injection, which he found necessary in a few cases. No results were noted after the injections in two cases of six and two years' standing. He administers potassium iodid as an indispensable adjuvant to the local treatment. He considers this method of treating detachment of the retina as the most rational at our command. He illustrates the eye before and after treatment in the two perfectly cured patients.

New Patents.

Patents of interest to physicians, etc., May 6 and 13:

699,166. Apparatus for purifying air. David Grove, Berlin, Germany.
699,401. Exercise device. Wm. F. Lott, East Orange, N. J.
699,255. Inhaler. Ernest Stevens, Philadelphia.
699,598. Burner and inhaler. Wm. R. Warner, Vergennes, Vermont.
699,637. Respirometer. Albert E. Aldrich, Lexington, Ky.
699,797. Hernial truss. Perjohan Fredin, Bridgeport, Conn.
700,139. Attachment for uterine packers. John E. Fuller, Mansfield, Mass.
699,916. Body kneader. Charles Gerling, Burlington, Iowa.
699,677. Medical battery. Fredric Greer, Chicago.
699,757. Child's teething nipple. Wm. Howell, Brooklyn.
699,897. Analgetic bandage. Thomas L. Ray, Fort Worth, Tex.
699,717. Sterilizer. Sam G. Scanlan, Chicago.
699,778. Water bag, Hubbard H. Upham, New York City.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 8 to 14, 1902, inclusive:

Daniel M. Appel, major and surgeon, U. S. A., detailed to represent the Medical Department of the Army at the Fifty-third Annual Meeting of the American Medical Association, to be held at Saratoga, N. Y., June 10 to 13, 1902, in addition to others previously designated.

James K. Ashburn, contract surgeon, relieved from further duty at Fort Grant, Ariz., and on expiration of present leave of absence will proceed from Batavia, Ohio, to Fort Crook, Neb., for duty at that post.

R. Emmitt Austin, contract surgeon, now at Fort Robinson, Neb., is relieved from further duty in the Department of Cuba, and will report to the commanding officer of that post for duty.

Harry D. Belt, contract surgeon, leave of absence for one month granted; he is relieved from further duty in the Department of Cuba and on his arrival at Fort Robinson, Neb., will proceed to Fort Keogh, Mont., for duty at that post.

John D. Brooks, contract surgeon, to proceed from Washington, D. C., to St. Paul, Minn., for assignment in the Department of Dakota.

H. L. Brown, contract surgeon, now at Fort Sheridan, Ill., will report to the commanding officer of that post for duty.

Lawrence C. Carr, major and surgeon, Vols., leave of absence for one month granted.

James R. Church, lieutenant and asst.-surgeon, U. S. A., to report on board the U. S. Cruiser *Dixie*, New York City, for the purpose of proceeding to Martinique, to distribute medical supplies and render necessary medical attendance to the inhabitants at that place, returning thereafter to his proper station.

Jere B. Clayton, lieutenant and asst.-surgeon, U. S. A., as Church, stated above.

Douglas F. Duvall, lieutenant and asst.-surgeon, U. S. A., leave of absence for one month granted.

James C. Gregory, contract surgeon, member of an examining board at Fort Myer, Va.

W. Church Griswold, contract surgeon, now at Albany, N. Y., to proceed to San Francisco, en route for service in the Division of the Philippines.

Valery Havard, lieut.-col. and deputy surgeon-general, is detailed to represent the Medical Department of the Army at the Second International Conference for the Prevention of Syphilis and Venereal Diseases, to be held at Brussels, Belgium, Sept. 1 to 6, 1902. On the adjournment of the Conference he will return to his proper station, Fort Monroe, Va.

Charles F. Kieffer, captain and asst.-surgeon, U. S. A., leave of absence for one month granted.

Louis M. Maus, lieutenant-colonel and deputy surgeon-general, is relieved from further duty in the Division of the Philippines, to take effect about June 30, 1902, and will then repair to Washington, D. C., and report for instructions to the Surgeon-General of the Army.

Donald P. McCord, captain and asst.-surgeon, Vols., leave of absence extended one month.

H. C. Moses, contract-surgeon, leave of absence from the Department of California extended one month.

Joseph Pettyjohn, contract surgeon, previous orders directing him to proceed to Augusta, Ga., for annulment of contract revoked.

John J. Riley, lieutenant and asst.-surgeon, U. S. A., as Church, stated above.

Gideon McD. Van Poole, lieutenant and asst.-surgeon, U. S. A., now under treatment at the Army and Navy General Hospital, Hot Springs, Ark., will report to the commanding officer of that hospital for temporary duty.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending May 17, 1902:

Surgeon W. F. Arnold, detached from duty at Guam, and ordered to the Naval Hospital, Yokohama, Japan, for treatment.

Asst.-Surgeon W. H. Bell, detached from the Naval Hospital, Norfolk, Va., and ordered to duty on board the *Chesapeake*, when that vessel goes in commission.

Drs. E. M. Brown, H. F. Shrine, J. P. Traynor and R. E. Hoyt, appointed assistant surgeons, May 8, 1902.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended May 15, 1902:

Surgeon R. D. Murray, granted leave of absence for 25 days from June 1.

Surgeon Eugene Wasdin, leave of absence for seven days, from May 2, 1902, under Paragraph 179 of the regulations, amended so that said leave shall be for three days.

P. A. Surgeon G. M. Guiteras, Bureau order of May 5, 1902, directing him to proceed to Philadelphia, amended so that he shall proceed to Cienfuegos, Cuba, for temporary duty; upon completion of temporary duty at Cienfuegos to proceed to Philadelphia.

Asst.-Surgeon Hill Hastings, detailed to represent the service at meeting of Southern California Medical Society at Idyllwild, May 22 and 23.

Asst.-Surgeon John McMullen, granted leave of absence for fourteen days from May 14. Relieved from duty at Boston, and directed to proceed to London, England, for duty in the office of the U. S. Consul-General.

Asst.-Surgeon J. M. Holt, relieved from duty at St. Louis, and directed to proceed to Honolulu and report to medical officer in command for duty, stopping en route at San Francisco quarantine for special temporary duty.

A. A. Surgeon Francis Duffy, granted leave of absence for special physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon H. W. Sawtelle, chairman; Asst. Surgeon L. P. H. Bahrenburg, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 17, 1902:

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 10, 21 cases.
California: Los Angeles, April 19-May 3, 11 cases; San Francisco, April 27-May 4, 7 cases.
Colorado: Denver, April 28-May 5, 3 cases.
Florida: Jacksonville, April 26-May 10, 4 cases.
Illinois: Belleville, May 3-10, 3 cases; Chicago, May 3-10, 1 cases, 1 death; Galesburg, May 3-10, 5 cases; Peoria, April 1-30, 26 cases.
Indiana: May 3-10, Evansville, 1 case; Indianapolis, 6 cases.
Kentucky: Covington, May 4-11, 13 cases; Lexington, May 3-10, 1 case.
Maine: Portland, May 3-10, 1 case.
Maryland: Baltimore, May 3-10, 5 cases.
Massachusetts: May 3-10, Boston, 28 cases, 6 deaths; Brockton, 1 case; Cambridge, 1 case; Everett, 2 cases; Lowell, 2 cases; Malden, 2 cases; Newton, 1 case; Northampton, 1 case; Somerville, 1 case.
Michigan: Detroit, May 3-10, 2 cases; Grand Rapids, April 26-May 10, 7 cases.
days from May 19.
A. A. Surgeon J. A. Rowles, granted leave of absence for thirty days from May 12.

BOARD CONVENED.

Board convened at the marine hospital, Chicago, May 31, for the
Minnesota: Winona, April 26-May 3, 1 case.
Missouri: St. Louis, May 4-11, 48 cases.
Montana: Butte, April 27-May 4, 4 cases.
Nebraska: Omaha, May 5-12, 29 cases.
New Jersey: Camden, May 3-10, 1 case, 2 deaths; Hudson County, including Jersey City, April 27-May 4, 32 cases, 6 deaths; Newark, May 3-10, 40 cases, 7 deaths; Passaic, April 26-May 10, 5 cases; Plainfield, May 3-10, 3 cases.
New York: New York, May 3-10, 58 cases, 9 deaths.
Ohio: Cincinnati, May 2-9, 11 cases; Cleveland, May 3-10, 4 cases; Toledo, May 3-10, 1 case; Youngstown, April 19-26, 1 case.
Pennsylvania: Columbia, May 5-12, 5 cases; Erie, May 3-10, 5 cases; Philadelphia, May 3-10, 24 cases, 2 deaths; Pittsburg, May 3-10, 17 cases, 1 death; York, April 1-30, 3 cases, 1 death.
South Carolina: Charleston, May 3-10, 2 cases; Greenville, April 26-May 3, 1 case, 1 death.
South Dakota: Sioux Falls, May 3-10, 1 case.
Tennessee: May 3-10, Memphis, 21 cases, 1 death; Nashville, 1 case.
Texas: San Antonio, April 1-30, 3 cases.
Utah: Ogden, April 1-30, 3 cases; Salt Lake City, May 3-10, 1 case.
Washington: Tacoma, April 27-May 4, 3 cases.
Wisconsin: Green Bay, May 4-11, 2 cases; Janesville, May 3-10, 3 cases; Milwaukee, May 3-10, 9 cases.

SMALLPOX—FOREIGN.

Great Britain: April 26-May 3, Birmingham, 7 cases; Gateshead, 1 case; Leeds, 1 case; Liverpool, 6 cases; North Shields, 7 cases; South Shields, 4 cases; Sunderland, 2 cases.
India: Bombay, April 8-15, 16 deaths; Calcutta, April 5-12, 2 deaths; Karachi, April 6-13, 3 cases, 2 deaths; Madras, April 5-11, 3 deaths.
Italy: Naples, April 12-26, 11 cases.
Mexico: City of Mexico, April 27-May 4, 1 case, 1 death; Vera Cruz, May 3-10, 2 cases.
Spain: Malaga, March 1-30, 5 deaths.

YELLOW FEVER.

Costa Rica: Port Limon, April 23-30, 1 case.
Mexico: Vera Cruz, May 3-10, 17 cases, 9 deaths.

CHOLERA.

China: Amoy, March 29-April 5, 2 cases, 2 deaths.
India: Bombay, April 8-15, 1 death; Calcutta, April 5-12, 17 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, April 29, 1 death.

PLAGUE—FOREIGN.

China: East Honam, May 2, epidemic.
India: Bombay, April 8-15, 664 deaths; Calcutta, April 5-12, 60 deaths; Karachi, April 6-13, 153 cases, 116 deaths.
Japan: Nagasaki, April 1-20, 1 death.